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PRESENTED TO

EDWARD BURNETT TYLOR

OCTOBER 2 1907

HENRY FROWDE, M.A.
PUBLISHER TO THE UNIVERSITY OF OXFORD
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E. B. Tylor Aet. 67

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ANTHROPOLOGICAL ESSAYS

PRESENTED TO

EDWARD BURNETT TYLOR

IN HONOUR OF HIS 75TH BIRTHDAY OCT. 2 1907

BY

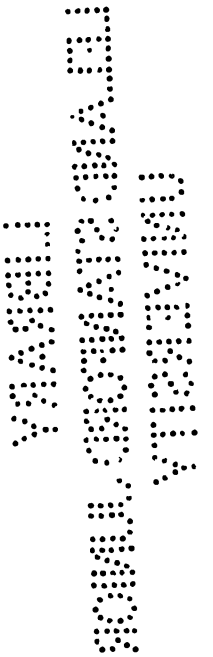
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WITH A BIBLIOGRAPHY BY
BARBARA W. FREIRE-MARRECO

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PREFACE

EARLY in the present year it was resolved to commemorate the seventy-fifth birthday of Dr. E. B. Tylor by presenting to him a volume of anthropological essays. If the volume is not entirely representative of English anthropology at the present day, the cause is to be sought in the short period available for the preparation of the essays and in the desire of all to give nothing which might seem to fall short of their best work. But in this offering are associated both those who contribute to the volume and others who, from lack of opportunity, were unable to lay a gift before the greatest of English anthropologists.

W. H. R. RIVERS
R. R. MARETT
NORTHCOTE W. THOMAS
} Editorial Committee.

The responsibility for the collection of the essays was confided to the committee whose signatures appear above, but the actual work of editing the volume and seeing it through the press has lain almost entirely in the able hands of Mr. Thomas.

W. H. R. R.
R. R. M.

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EDWARD BURNETT TYLOR

By ANDREW LANG, M.A., LL.D.

It was my fortune to make Mr. Tylor's acquaintance at Oxford, about the year 1872, before I had heard of any of his books, in which his masterpiece, *Primitive Culture*, was already numbered. The distinguished and witty lady who introduced us to each other had, and, alas! has, rather more than the ordinary aversion from things primitive, and from the study of benighted heathens. She informed me that Mr. Tylor had written 'a large book, all about savages', in whom Mr. John Fergus M'Lennan had already interested me by his essays on totemism. Thus my acquaintance with Mr. Tylor and his great book began thirty-five years ago, when he, beside Sir John Lubbock, already towered above all British anthropologists, like Saul above his people. Since these early days I have often had the pleasure of being with Mr. Tylor in social fashion, and have again and again perused his books. But it is my misfortune to know little of his Museum work, though even brief and cursory visits to the Pitt-Rivers Museum demonstrate that it is on a level of excellence with his written expositions; and I have never been present at any of his lectures to his Oxford pupils. His later years have been spent in academic toils; he has sent his pupils into many strange lands; they have been the field naturalists of human nature, no less than anthropologists of the study. If England possesses an unofficial school of anthropologists, despite the public indifference to man not fully 'up to date', she owes it to the examples of Mr. Tylor and Lord Avebury. But I am only an amateur, and have especially to deplore my slender acquaintance with the work of Mr. Tylor's eminent German predecessors and contemporaries. A pupil less competent than I to estimate Mr. Tylor's work in its relations to his study, as pursued on the Continent and in America, could scarcely be found. Indeed, I speak rather as one of the outer circle —of the Court of the Gentiles—than as a professed anthropologist.

It is to be noted that, in 1860–1870, a fresh scientific interest in matters anthropological was 'in the air'. Probably it took its rise,

not so much in Darwin's famous theory of evolution, as in the long-ignored or ridiculed discoveries of the relics of Palaeolithic man by M. Boucher de Perthes. Mr. Henry Christy, a friend of Mr. Tylor, and Sir John Evans, helped greatly to establish the authenticity of the discoveries of M. Boucher de Perthes, and while they were mainly exercised with the development of man's weapons, implements, and arts, Mr. Tylor, with Lord Avebury, studied his mental development as revealed in his customs, institutions, and beliefs. Mr. M'Lennan and Sir Henry Maine were contemporaneously laying the foundations of the study of earlier and later jurisprudence, and of this generation of heroes we are but the epigonoi; fortunate in this, that we still have among us so many distinguished survivors of the great age.

The track or trail left by our ancestors of the stone age has for thousands of years attracted curious minds. Hesiod had his theory of progress and of successive races, beginning with gods, followed by heroes, and passing through the age of bronze, 'when as yet black iron was not.' Moschion touches on cave-dwellers, whom he regards as cannibals; and Lucretius traces religion to the belief in spirits, or 'animism', bred of reflection on the phenomena of breath, dreams, and shadows. The Greek geographers, and Herodotus and Aristotle, were curious about the institutions of savage and barbaric races; while, in the eighteenth century, Goguet, Fontenelle, Boulanger, des Brosses, Professor Millar, of Glasgow, and others, explained the rise of mythology, and the origin of rank, on the lines of modern anthropological science. The idea of evolution, for all that we know, is as early a conception of thinking men as the idea of creation; both exist among the most primitive savage races; and, in short, all that the speculators of the last and the present age can do is to bring wider study, and more precise methods, into the investigation of human development.

In the middle of the nineteenth century the advance of philological science, with the theory that mythology is the result of 'decay of language'; and the other theory that degeneration has more to answer for than we can admit, caused a temporary diversion from the ideas of Lucretius and Fontenelle. Fortunately these notions did not distract Mr. Tylor from the path which he was born to follow. His interest in his subject may have been aroused by the early tour to Mexico which bore fruit in his first volume *Anahuac, or Mexico and the Mexicans* (1861), followed by his volume *Researches into the Early History of Mankind* (1865, 1870, 1878).

It is interesting and instructive to look back at this work of forty years ago. It is a series of essays towards a history of civilization, a history necessarily based rather on *Realien*, savage weapons, implements, arts and crafts, and on myths, customs, and beliefs, than on written materials. Forty years ago, Mr. Tylor was conscious of working on a new topic; but he has made it familiar to some members of two generations of Englishmen; in Germany much 'culture history' had already been written.

Mr. Tylor's main interest has been in belief and institution, but at a later date he made a notable contribution to the study of *Realien* by his article (*J. A. I.*, x. 74) on the plough and wheel-carriage. Ten years after this (*J. A. I.*, xix. 54) he traced the 'face-brasses' on harness to their source in the *phalerae* of the Romans.

From beginning to end of his book, the author's mind was occupied by the question, among the countless coincidences of customs, beliefs, arts and crafts, games, riddles, proverbs, institutions, how much has been diffused and borrowed, how much is of independent invention? Did Aztecs and Polynesians borrow from Asiatic sources? When a tribe (probably now extinct) on the Glenelg river in Victoria, *polished* stone axes of jade, so rare a mineral in Australia, had they learned the art from Malays? Or is the explanation that, finding unusually good material, they worked it with unusual care? Here is a problem in the solution of which we have made little progress in forty years. My own bias is to seek a solution in original, independent, and coincidental invention; while, even now, popular writers lean to theories of unity of race; and even totemism has been regarded as diffused from some single unknown centre. Mr. Tylor, in *The Early History of Mankind*, tended more to a theory of the borrowing of myths and *Märchen* than I have ever been disposed to do; in short the natural bias of the speculator usually affects his opinion in this difficult case, except when there is distinct and definite evidence for a single original centre of invention.

That spiritual or animistic beliefs arise, independently, wherever men dream by night, and see phantasms by day, Mr. Tylor, in 1865, already maintained, developing the idea into a theory of the origin of religion, in his later work, *Primitive Culture*. He was certain that phantasms beheld with waking eyes are 'subjective processes of the mind', and did not trouble himself about 'coincidental' and 'veridical' apparitions, till he wrote *Primitive Culture*. The materials which have come in since 1865 afford many additions to his excellent

chapter on 'Gesture Language and Word Language', while Mr. Arthur Evans's Cretan and Levantine discoveries have contributed much to the topic of 'Picture Writing and Word Writing'. In this field the last fifteen years have been peculiarly fruitful of results. But nothing has been discovered as to the influence of 'Names' which was not stated, or foreshadowed in Mr. Tylor's study of the subject, and his chapter about 'Growth and Decline in Culture' firmly traced the lines on which science is still content to build. His chapters on 'The Stone Age, Past and Present' are still the best English introduction to the subject. The pages on 'Fire and Cooking' ought not to be neglected by the sweet enthusiasts who persevere in averring that Polynesians cannot light fire, and do their cooking without it.

A topic in which forty years have seen much fresh knowledge garnered is what Mr. Tylor called 'The Comparative Jurisprudence of the lower races'. His evidence was collected before the publication of J. F. M'Lennan's epoch-making 'Primitive Marriage', which Mr. Tylor saluted as 'the first systematic and scientific attempt to elicit general principles from the chaotic mass of details of savage law. . . .' Chaotic they still remained, for we find that the word 'tribe' was then (as it sometimes is still) used as a synonym for 'totem-kin', and also for 'the matrimonial classes', or 'sub-classes' of the Kamilaroi. Ippai, Kubbi, Kumbo, and Buta appear as 'tribes', reported on under that title by Dr. Lang: and, with Sir George Grey, the totem name is 'the family name'. The Iroquois have 'eight tribes', these 'tribes' being really 'totem-kins'; in short, forty years ago, information was scanty, and terminology was even more indistinct than, unhappily, it is at present. There was better information about 'Avoidances' between kinsfolk whether by blood or 'in law', but the original purpose of these avoidances is still matter of controversy. Why, for example, may 'the father not speak to his son after his fifteenth year'? It does not appear probable that all avoidances were instituted for the same reason, and Mr. Tylor found no single reason that would account for all avoidances.

The researches and speculations of almost half a century, into some parts of the jurisprudence of the lower races, have failed to produce any agreement of opinion, at least in the case of laws regulating marriage, but the remarkable statement has been emitted that we ought especially to distrust any hypothesis which, in complex matter, professes to colligate all the facts. The hypotheses which

fail to do so are the more respectable. Of these, happily, there is great plenty.

For the next four years after 1865, Mr. Tylor was laying the foundation stones of his system in papers on 'The Religion of Savages', 'The Condition of Prehistoric Races,' 'The Survival of Savage Thought in Modern Civilization,' and other essays. At the close of this period the researches of Mr. Lewis Morgan into systems of kindred, with the very original pioneer essays of Mr. J. F. M'Lennan on Totemism in relation to Primitive Marriage and Exogamy, opened a field as thorny as expansive, a field into which Mr. Tylor, as far as his published works are concerned, has made few incursions.

The most notable of these is his epoch-making article (*J. A. I.*, xviii. 245) on a Method of Investigating the Development of Institutions applied to the Laws of Marriage and Descent. In this Mr. Tylor aimed at showing that the development of institutions might be investigated on a basis of tabulation and classification. He had scheduled out into tables the rules of marriage and descent all the world over, so as to ascertain what may be called the 'adhesions' of each custom, showing what people have the same custom and what other customs accompany it or lie apart from it.

On this basis Mr. Tylor discussed the rules of residence after marriage, its connexion with avoidance, with teknonymy (naming of parents after children), with the levirate, with the couvade, and with marriage by capture, and showed that the residence of the husband with the wife's people was, so far as his schedules gave information, indisputably anterior to the residence of the wife with the husband, though he was careful to point out that this was not necessarily the most primitive state of things.

Then taking up exogamy and the classificatory system of relationship, Mr. Tylor displayed them as two sides of the same system, and argued that the purpose of exogamy was to enable a growing tribe to keep itself compact by constant unions between its spreading clans. Finally he stated that there were still a hundred or more peoples in the world for which he had no information, and expressed the hope that each civilized country would take in hand the barbaric regions within its purview.

In 1871 he produced his chief work, *Primitive Culture*, and at once appeared as the foremost of British anthropologists. The extent of his reading, his critical acumen, his accuracy, his power

of exposition, his open mind, and his scientific caution make this book no passing essay, but a possession for ever. He laid the firm foundation of a structure to which, with accruing information, others may make additions; he himself has made and is making additions; but his science passed, thanks to him, out of the pioneering stage, at a single step. He stood on a level with Bastian; their names are, in the pre-historic history of man, what the name of Darwin is in regard to the evolution of animal life. There are, indeed, as there must be, modifications to be suggested, and verdicts to be revised; but in the future, as in the present, it is from Mr. Tylor's work that the beginnings must be made; and he who would vary from Mr. Tylor's ideas must do so in fear and trembling (as the present writer knows by experience).

Mr. Tylor, in the preface to his second edition (1873), observes that 'writers of most various philosophical and theological schools now admit that ethnological facts are real, vital, and have to be accounted for'. He had emancipated us from exclusive and rather fanciful attention to 'the Aryan race'. He had proved that man, in Byron's words, is 'always and everywhere the same unhappy fellow', whatever the colour of his hair or skin, and the shape of his skull. *Homo*, in the earliest stage at which we make his acquaintance, is already the philosopher, artist, and man. He 'finds something craggy to break his mind upon', and we have scarcely a theory concerning the deeper problems of life which savage man has not already invented in his mythical Platonic way. Each of his myths, for example, explaining the origin of Totemism has its counterpart in a modern theory: his ghosts are our phantasms; and his religion justifies a famous saying of Tertullian. We cannot escape from him in any field of activity; we repeat his theories without knowing; or knowingly, as when Mr. F. W. H. Myers boldly proclaimed his own reversion to 'palaeolithic psychology'. Without the ideas of the savage (as Keats averred) we should have no poetry worthy of the name, and these fruitful rudiments, not to be styled 'superstitions', Mr. Tylor named 'survivals'; a term which implies no reproach.

But it is fair to civilized man to say, that if his savage ancestors had bequeathed to him no superstitions, he would have invented them anew for himself. Such is human nature; witness the cases of Zola and Dr. Johnson.

Not the least of Mr. Tylor's gifts, as the founder of his science,

is the happy simplicity and unobtrusive humour of his style. Not stuffed with strange technical words, his language, as in his admirable chapter on 'Survival in Culture' (iii) is so attractive, so pellucid, that any intelligent child could read it with pleasure, and become a folk-lorist unawares. The doctrine of survivals, though incontestable in general, has its difficulties. We meet phenomena in savage culture which one set of students recognizes as 'survivals'; while, in the same facts, other inquirers see novelties, freaks, or 'sports'. An example is familiar; several of the customs and beliefs of the tribes of Central Australia are, on one side, explained as survivals of *primitive*, on the other, as recent modifications of *decadent* totemism.

From survivals in games, proverbs, riddles, and the minor superstitions, such as those of sneezing, Mr. Tylor glides into Magic, as based on association of ideas; into omens, automatisms, witchcraft, spiritualism, and the doctrine of spirits, 'Animism,' with its influences on religion and mythology. Even races which believe in magic, he says, unconsciously judge it when they regard their more backward neighbours as more potent magicians than themselves. Protestants in Germany, says Wuttke, get Catholic priests to lay ghosts for them. Why not, if the ghost be a Catholic ghost? The Rev. Mr. Thomson of Ednam, father of the author of *The Castle of Indolence*, was slain by a ghost, obviously not Presbyterian, whom he, a Presbyterian, imprudently attempted to lay. The house haunted by this ghost had to be pulled down, so say the annals of the parish.

Nothing stands still, and, since the date of Mr. Tylor's book, psychologists have studied some savage modes of divination, for example by the divining-rod, and crystal-gazing, as instances of 'automatism', and of the action of the sub-conscious self. The divining-rod, not known to the Australian black water-seeker, survives among ourselves, because the automatic faculty survives in man, even when he has science enough to explain the phenomena not by the agency of spirits, but 'electricity'. Melanesians and other savages have observed facts of automatism, motor or sensory, and explained them, of course, by the action of spirits. It is the animistic explanation, as held by modern spiritualists, not the facts of automatism, that is the survival. Mr. Tylor concluded that 'there is practically no truth or value whatever' in 'the whole monstrous farrago'. But there now appears to be (indeed Mr. Tylor himself foresaw the fact) a good deal of value for the

psychologist, and some light is thrown on the more obscure faculties of the race.

Mr. Tylor himself recognized that 'occult' arts may produce practical effects by suggestion, a fact noted, utilized, and erroneously explained by savages and rustics, and even by Richard Baxter, Woodrow, the Mathers, and other learned divines. The frenzy of spiritualism, as Mr. Tylor showed, in the mid nineteenth century, was a revival, or recrudescence in culture. It resembled the *furore* against witches, which, north of Tweed, came in under John Knox, and flourished through the Puritan period; though, in Scotland, the elder faith had been too wise, or too indolent, to persecute witches. With his habitual caution and open-mindedness, Mr. Tylor remarked that a careful and scientific observation of some of the new or revived marvels 'would seem apt to throw light on some most interesting psychological questions', beyond the scope of his inquiry. An instance in point is the 'Poltergeist', though it cannot be said that observation has done much to explain *him*, except as associated with the presence of a more or less 'hysterical' person. Mr. Tylor's affair was to discover great numbers of ethnological parallels to the *speciosa miracula* of spiritualism, and to leave the matter there for the present; while the savage animistic explanation led up to the whole vast subject of Animism.

A most interesting part of Mr. Tylor's work is his analysis (chapter VI) of words denoting human relationships, and their connexion with 'baby language'. If we follow the linguistic indications, fatherhood seems of as early recognition as motherhood. We are not told in what tribal language of Australia *mamman* means 'father', and, in such lists as Messrs. Spencer and Gillen and Mr. Howitt supply, words for 'father' derived from 'baby language' do not seem to prevail. The *papa* of the Carib and the Caroline Islander and the modern Briton, when it occurs in several North Australian languages, means the seniors, but not the father. The 'baby language' terms give 'striking proof of the power of consensus of society, in establishing words in settled use *without their carrying traces of inherent expressiveness*'.

It does not follow, I may add, that such inexpressive terms of relationship imply a past when men did not recognize consanguinity. Mr. Tylor, in 1871, did not judge the time ripe for a discussion of classificatory terms of relationship, of early marriage, of exogamy, and totemism. On these topics we may expect, and

even with impatience, his mature views in the great work with which he has long been occupied.

In 1871 he spoke, as concerns totemism, of 'the direct worship of the animal for itself, indirect worship of it as a fetish acted through by a deity, and veneration for it as a totem or representative of a tribe-ancestor'. He also connected the totem with animism, the worship of 'a divine ancestral soul' (pp. 237, 238). A leaning towards the same theory may be observed in his 'Remarks on Totemism' (1898, *J. A. I.*, xxix. 138). The difficulties in the way of this hypothesis have often been pointed out, and we expect their solution.

From the first, in 1871, Mr. Tylor distinguished sharply between the totem of the kin, hereditary in the female or male line, and 'the mere patron animal of the individual'. This essential distinction he has continued to maintain. On the whole topic Mr. Tylor has ever shown great and laudable caution; may others be forgiven who have hazarded hypotheses much at the mercy of new invading facts that undermine our cloud-capped towers of conjecture! Mr. Tylor rejected the explanation of totemism, which derived it from the adoption, by a man's descendants, of his individual name, such as Bear, Deer, or Eagle. It would, in fact, be necessary to substitute here for 'the individual man', 'the individual woman,' among tribes which inherit the totem on the female side.

Arriving at the old problem of the origins of mythologies, Mr. Tylor fell back on the ancient wisdom of Eusebius of Caesarea, the half forgotten sense of Fontenelle; took 'savage mythology as a basis', and convincingly proved that mythology is the natural product of the mental condition of savages.

Even in Greece, in tales usually left untold or carefully subordinated by Homer, myth retains its savage birth-marks. With this key the old lock is opened, and we understand that the mythical vagaries of gods, and beasts, and men, closely resembling even in minute details the stories of savages, are survivals, repulsive flies caught in the amber of ritual and religion. This theory Mr. Tylor worked out with wonderful tact, never throwing a stone into the adjacent garden of Mr. Max Müller, whose solar theory and philological method were then dominant in this country. Mr. Tylor's idea was not new; perhaps there are no new ideas; his merit lay in his patient, sagacious, well 'documented', and, at last, convincing method of exposition. Nothing was left but

to apply the system in detail to every realm of mythological creation; and though, in certain learned circles at home and abroad, the method was for long ignored, or resisted, in the end it has triumphed; accompanied, as it has been, by the system of Mannhardt, who paid more attention to European folk-lore, with its survivals of early ritual, than did Mr. Tylor.

The scent may, of course, be overrun by too eager pursuers. It seems rather hasty to maintain that the tuneful Orpheus was a fox, a 'sex-totem' of the women of Thrace; and I sympathize with the cautious author who remarked that '*Blindman's Buff* is not necessarily a survival of human sacrifice'. It is possible, or rather it is easy to consider too curiously: there was a tendency to see totems everywhere, as in the name and crest of Clan Chattan, or in the final syllable of Glencoe, which a judicious linguist will not translate 'the Glen of the Dogs'. There was a time when I was apt to see *churinga nanja* everywhere; and my sole excuse is that the European neolithic and palaeolithic things were exactly like *churinga nanja*. We generally have some special pet idea which we overdo; not taught by the reserve of Mr. Tylor, whom a kind nature has exempted from the obsession of the *idolon specus*, and whose method does not lend itself to parody.

If this were the place for criticism, and if I were anxious to 'lift up my hands against my father Parmenides', I would confess a certain difficulty. Is 'the belief in the animation of nature, rising at its highest pitch to personification'—and, in itself, a main source of mythology—identical with 'the doctrine of Animism' (i. 285)? Could a savage, or a child, not conceive (in the spirit of analogy) that the wind or the sun is, like himself, a living person, before the child had heard of a ghost, or the savage had developed for himself the belief in bodiless souls? It appears that the notion of universal vitality is, really, not the same as 'the doctrine of Animism, which develops and reacts upon mythical personification' (i. 287). Indeed, as Mr. Tylor observes, many forms of thought 'work in mythology with such manifold coincidence as to make it hard indeed to unravel their separate action'.

Animism, indeed, is first treated apart from Mythology; and the Lucretian theory of the origin of spiritual beliefs is worked out through a long sequence of examples. But Lucretius had to adopt a theory to account for the casual hallucinatory phantasms beheld by sane, healthy, and waking men, which was easily demolished by

Plutarch; while Mr. Tylor is too wary 'to discuss on their merits the accounts of what is called second sight'. Savages as well as civilized persons have the second sight, and that is enough for his purposes. He gives modern instances—which are as common as blackberries—but it suffices him that these experiences offer one basis of the doctrine of Animism, and it is not his business to ask whether the basis is not a pretty solid foundation stone for a towering palace of mirage.

In Animism the savage philosopher had a ready key to most problems that puzzled him. Spirits were 'at the bottom of them'; they were, to him, what electricity is to the modern popular mind. It is even more curious to notice how much savages differ in their animistic philosophies than to observe the points in which they agree. It seems to myself that, except in East Africa, Fiji, and, doubtless other regions, the savage, or barbarian, is not much of a ghost-seer. The Masai are said not to believe in ghosts, though, inconsistently, they say that cattle can see ghosts, as the people of St. Kilda used to believe (Martin's *St. Kilda*).

A ghost-seer is rare in Australian tribes; and the Semangs, according to Mr. Skeat, think but little of phantasms of the dead. It almost seems as if some savages left ghosts behind, and applied the animistic theory chiefly as a philosophical hypothesis. The Arunta are notorious for their far-reaching and well-organized philosophy of Animism, but seem not to see ghosts, or not often, and are indifferent to the wants of their deceased and disembodied friends. Other races, again, whose religion of ghost-feeding and ghost-worship is based on animism, do not use it with the freedom of the Arunta in their metaphysics and philosophy.

The more Animism, the less 'All Fatherism', if I may use Mr. Howitt's term for the superior being, such as Baiame, believed in by many tribes in Australia and elsewhere. In Mr. Tylor's theory of religion as based on Animism this kind of being has his place, but often there is nothing animistic in the native conception of his nature. The opposite opinion has been caused by the loose employment of the word 'spirit', 'great spirit', by European observers. In his expected book Mr. Tylor may perhaps again consider this fact of non-animistic religion. Meanwhile he began by exposing the vulgar error of denying to many races any vestige of religion; an error caused by narrow definitions of the term. As 'a minimum definition of Religion', he gives 'the belief in Spiritual Beings'. Nobody can define 'Religion' so as to satisfy every one, and conceivably an

irreligious mind may believe in spiritual beings, while a religious man may feel that he owes moral duties to a being whom he does not envisage as a spirit. It is clearly 'an *idolon* of the cave', or study, to regard such a belief as an advanced idea, beyond the reach of a low savage. We have no notions of religion which low savages have not developed, in their rough way, upon which we merely refine. As Mr. Tylor says, 'conceptions originating under rude and primitive conditions of human thought, and passing thence into the range of higher culture, may suffer in the course of ages the most various fates, to be expanded, elaborated, transformed, or abandoned. Yet the philosophy of modern ages still to a remarkable degree follows the primitive courses of savage thought, even as the highways of our land so often follow the unchanging tracks of barbaric roads.'

The most marked difference between the third (1891) and the first edition of *Primitive Culture* was an extension of the theory of savage and barbaric borrowings from the religions of Christianity and Islam. But the material obstacle of stereotyped plates prevented the author from working out this idea in sufficient detail. Mr. Tylor expressed his views more fully in 'The Limits of Savage Religion' (*J. A. I.*, 1891, xxi. 283).

'Timidly and circumspectly,' in his own words, Mr. Tylor has sketched the outlines of his great system of the evolution of religion. That kingdom cannot be taken by violence; no fragile ladders of hypothesis raised upon hypothesis can enable us to scale the *flammantia moenia.*

On re-perusing the long familiar pages of *Primitive Culture* one is constantly impressed anew by their readableness. Never sinking to the popular, Mr. Tylor never ceases to be interesting, so vast and varied are his stores of learning, so abundant his wealth of apposite and accurate illustration. Ten years was this work in the writing, and it may be said that *le temps n'y mord*; that though much has been learned in the last thirty years, no book can ever supersede *Primitive Culture.* It teaches us that, in examining the strangest institutions and beliefs, we are not condemned *à chercher raison où il n'y en a pas*, as Dr. Johnson supposed. The most irrational-seeming customs were the product of reason like our own, working on materials imperfectly apprehended, and under stress of needs which it is our business to discover, though they have faded from the memories of the advanced savages of to-day. We must ever make allowance for the savage habit of pushing ideas to their logical conclusions, a habit which our

English characteristics make us find it difficult to understand. We are also made to see that man is, and will continue to be, a religious animal. As Dean Swift acutely observed, 'the Abolishment of the *Christian* Religion will be the readiest Course we can take to introduce Popery . . . and supposing Christianity to be extinguished, the People will never be at Ease till they find out some other Method of Worship, which will as infallibly produce Superstition, as this will end in Popery.'

Mankind, deprived of religion, would begin again at the beginning,

> For ghosts will walk and in their train,
> Bring old religion back again.

While *Primitive Culture* is the basis of 'Mr. Tylor's Science', as Mr. Max Müller called it, he has made many other valuable additions to knowledge. Among these are his contributions to catechisms for field anthropologists. Many intelligent European and American observers, among savages, are interested in, and desire to record, what they see and hear, but are not acquainted with what is already known to specialists, and are painfully vague in their terminology. For their edification Mr. Tylor has drawn up eighteen sections in 'Notes and Queries on Anthropology' (British Association, 1874, 1892). In the *Encyclopaedia Britannica* (ninth edition) he wrote on Anthropology, Oaths, Ordeals, Magic, Cannibalism, Divination, and other topics. In the Game of Patolli (*J. A. I.*, viii. 116) he investigated the difficult theme of the diffusion, or independent invention of this game in Asia and America or to America from Asia.

It seems, at present, almost impossible to limit the range of coincidence in invention, but this example stretched our ideas of its powers to the uttermost. It is much to be desired that Mr. Tylor's scattered contributions should be collected in a volume. His Gifford Lectures at Aberdeen, still unpublished, form, it is to be presumed, the germ of the great work with which he is still occupied. Since 1891 an enormous quantity of fresh information as to the customs, institutions, and beliefs of backward races has come to our knowledge. From Australia, Africa, and America we have received records, often most carefully made, thanks to Mr. Howitt, Messrs. Spencer and Gillen, Mrs. Langloh Parker; the students of the Bureau of Ethnology at Washington, Mr. Hill Tout, and many other intelligent witnesses. New hypotheses are not less common than new facts, and the anthropological world eagerly awaits Mr. Tylor's treatment of the evidence,

and his criticism, if he chooses to offer it, of the new theories. He has never been a man of controversy; his discussion with Mr. Herbert Spencer (*Mind*, 1877) had a foredoomed end. With all respect to Mr. Spencer, he took up anthropology as a *πάρεργον*; he was less familiar with facts than fertile in conjectures, and much of his reading was done by proxy, an impossible method.

Mr. Tylor has done one piece of *vulgarisation* in his 'Anthropology', a manual of the subject, 'an introduction' to the science. Such manuals cannot 'go rather deeply' into any point, and I burn to discuss with him his notions of the evolution of the shield, the parrying buckler and the great screen-shield. But, even on this point, much information has accrued, which was not accessible to any inquirer in 1881. The book contains ideas about the family which are not fashionable, though I believe them to be correct. Mr. Tylor's theory does not start from the hypothetical promiscuous horde, or Mr. Howitt's 'Undivided Commune', and assume that the family was slowly evolved out of that *prima materies*. On the family, he says, 'the whole framework of society is founded,' wherefore the family must be prior to the totem kin and the tribe. 'Among the rudest clans . . . the family tie of sympathy and common interest is already formed. . . .' Again, 'the natural way in which a tribe is formed is from a family or group, which in time increases and divides into many households, still recognizing one another as kindred. . . .'

Probably Mr. Tylor would now modify these statements, but it does not seem probable that he will ever appear as the advocate of a primal state of promiscuity. Whatever theory he may produce is certain to deserve the most respectful attention, for his combination of wide knowledge and of sagacious caution gives his opinion an unequalled weight in his own science.

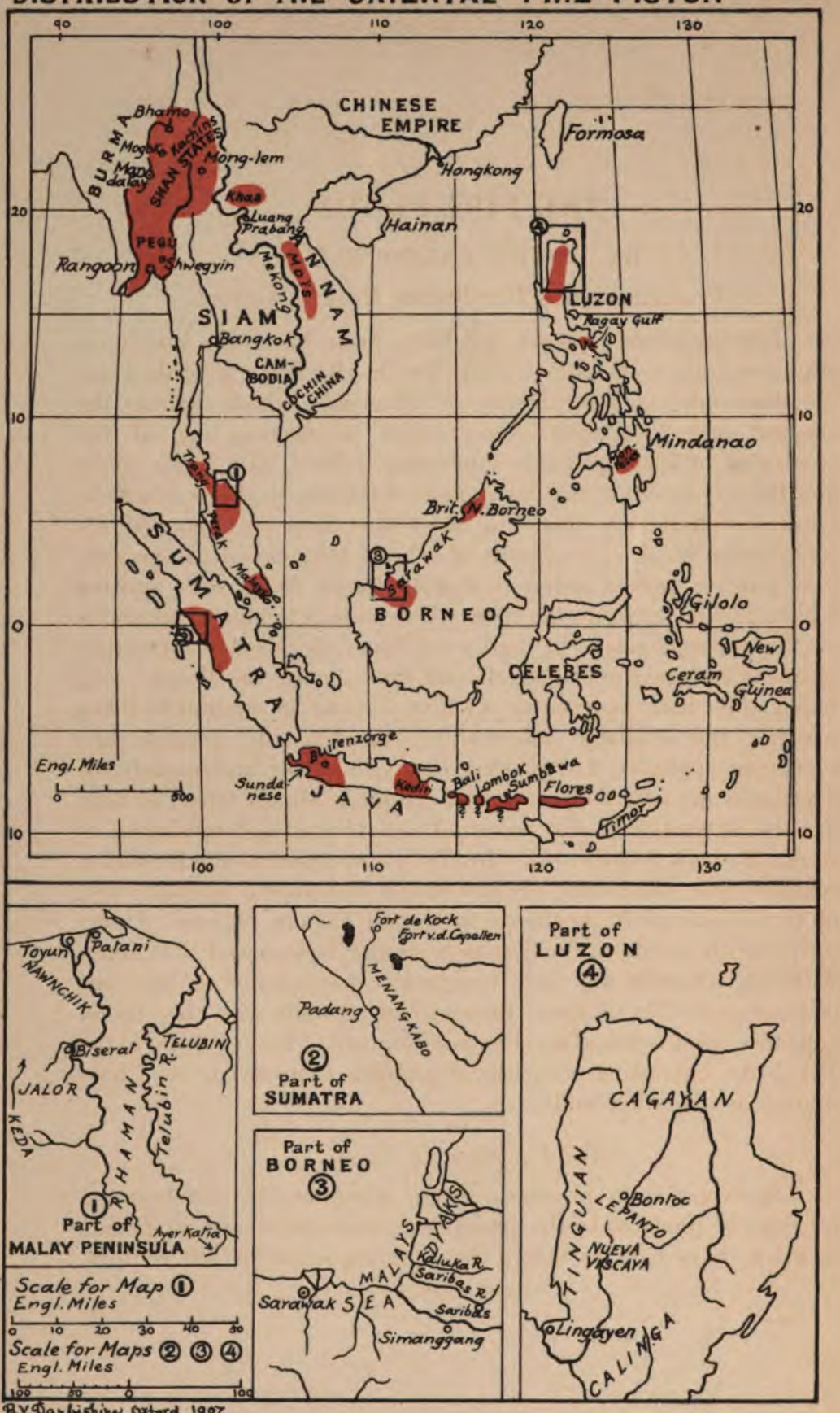
It has been no part of my conception of my task to enter into the details of Mr. Tylor's biography. We know that, like the minstrel of Odysseus, he was 'self-taught' in so far as he was the *alumnus* of no University. In his youth the *curricoolum* (as the Scottish baronet styled it) of the Universities did not embrace the study of savagery and of the advance from savagery. His example and energy, with the munificent gift of General Pitt-Rivers, the Museum over which Mr. Tylor presided, have founded, in Oxford, a school of Anthropology, though, as the undergraduate observed, 'there is no money in it.' Ours is a purely disinterested science. How much Cambridge has done, and is doing, for Anthropology, is known to the

learned world. Though we do not dwell on Mr. Tylor's biography, we may regard him as a man not less serviceable than happy. His genius has been favoured by the gift of leisure, and (may I be permitted to say?) by the long companionship of the lady who shares his interests and aids his researches.

As to Mr. Tylor's poetical productions, their extent and merit, his modesty forbids inquiry. I only know that, *nec cithara carens*, in collaboration with my weaker muse, he is the author of *The Double Ballade of Primitive Man.*[1] It was at first a single *ballade* of three stanzas. Mr. Tylor's additions raised it to the estate of a Double *Ballade* of six.

[1] In *Ballades in Blue China.*

DISTRIBUTION OF THE ORIENTAL FIRE-PISTON



R.V. Darbishire, Oxford, 1907.

THE FIRE-PISTON

BY HENRY BALFOUR, M.A.

CURATOR OF THE PITT-RIVERS MUSEUM, OXFORD

THE fire-piston appears to have been but little known to ethnographers at the time when Dr. E. B. Tylor published his *Researches into the Early History of Mankind*,[1] which contains the classical and fascinating chapter upon fire-making, one of the pioneering articles upon this interesting subject. Dr. Tylor refers (p. 246) very briefly to this instrument as follows :—'There is a well-known scientific toy made to show that heat is generated by compression of air. It consists of a brass tube closed at one end, into which a packed piston is sharply forced down, thus igniting a piece of tinder within the tube. It is curious to find an apparatus on this principle (made in hard wood, ivory, &c.) used as a practical means of making fire in Birmah, and even among the Malays.' If, taking this short sentence as my text, I make an attempt to bring together the available information regarding this peculiar fire-producing appliance, I trust that I may, however inadequately, be offering as my contribution to this volume a subject which at least has the sympathy of the honoured and veteran anthropologist, to whom the book is dedicated. Dr. Tylor's reference to the fire-piston contains two statements, (1) that it is a well-known scientific toy, (2) that it is a useful appliance in certain Eastern regions. I may conveniently divide my subject in a similar fashion and deal firstly with the 'scientific toy' and its practical descendants as they exist or have existed in civilized Europe, and secondly with the 'useful appliance' as it is found amid an environment of lower culture in the East. An interesting ethnological problem is involved, one whose solution is somewhat baffling.

The Fire-piston in Europe.

Appreciation by physicists of the scientific fact that heat and cold may be produced by the mechanical condensation and rarefaction of gases, dates back to before the commencement of last century.

[1] London, 1878.

A paper upon this subject was read by John Dalton in the year 1800,[1] giving the results of experiments in the compression and rarefaction of air, which were noted as producing increased and decreased temperatures. On December 29, 1802, M. Mollet, Professor of Physics in the Central School at Lyons, announced to the Institute of France that he had noticed that tinder could be ignited by placing a small piece in the narrow channel with which the lower end of a pump for condensing the air in an ordinary condensation pump is furnished. Two or three strokes of the piston were usually sufficient to cause a spark.[2] He also stated that he had observed a luminous appearance caused by the discharge from an air-gun in the dark. On the strength of this announcement, J. C. Poggendorff[3] refers to Mollet as the discoverer of the *Tachypyrion* (instrument for producing fire by compression of air). On the other hand, we may gather from F. Rosenberger[4] that a workman in the small-arms factory at Etienne-en-Forez (near Lyons) was the actual discoverer of the fact that a great amount of heat was generated in charging an air-gun with an ordinary compression-pump, and that tinder could be ignited thereby. Mollet is here stated to have communicated this discovery by the workman, who must, if Rosenberger's account is the true one, be credited as being the original French observer of this phenomenon, Mollet having acted as the reporter of the discovery. The facts announced were not understood by the French scientists, who were inclined to discredit them, but very soon the experiment with the air-compression pump was repeated by others, and tinder (*amadou*) was easily ignited by this means. A letter was sent by M. A. Pictet, one of the editors of the *Bibliothèque Britannique*, to Mr. Tilloch in England, on January 1, 1803, announcing Mollet's communication to the Institute of France,[5] and the writer stated that he considered the phenomenon as never having been noticed before. But William Nicholson affirmed[6] that it (the flash from an air-gun) had been

[1] *Mem. Manchester Lit. and Phil. Soc.*, v, pt. ii, p. 515, 1802.

[2] *Journal de Physique*, lviii, 1804, p. 457; *Nicholson's Journal of Nat. Philosophy, Chemistry, and the Arts*, iv, 1803; *Philosophical Magazine*, xiv, p. 363.

[3] *Biograph.-Literarisches Handwörterbuch*, ii, 1863, Leipzig.

[4] *Geschichte d. Physik*, 1887, iii, p. 224.

[5] *Philosophical Magazine*, xiv, p. 363.

[6] *Nicholson's Journal*, l. c.; Marc Auguste Pictet, 'Sur l'échauffement des projectiles par leur frottement contre l'air,' *Bibliothèque Britannique*, xxiii, 1803, pp. 331-6.

known for some time in England, having been first mentioned nearly a year and a half previously by Mr. Fletcher at a meeting for philosophical experiments and conversations, which was then held weekly at Mr. Nicholson's house. He adds, 'It is a curious phenomenon, and deserves investigation.' No one at the time explained the cause of the phenomenon, which had been accidentally noticed and had not been arrived at by direct scientific experiment. Nicholson's statement is interesting, not only as assigning the first observation of this physical effect to an earlier date (somewhere about the middle of the year 1801), but also as ascribing to an Englishman its discovery.

In later days the experiment of igniting tinder in a compression-pump became a common one in physical laboratories, and fire-pistons were specially made for the purpose. These consist usually of cylinders of brass, closed at the lower end and very accurately bored or gauged. Into the bore fits a piston-rod, carefully packed at the lower end, so as to occupy the bore as completely as possible. At the lower extremity of this piston-rod is a cup-like depression, in which a piece of *amadou* can be placed. By driving the piston-rod home very forcibly the column of air in the cylinder is violently compressed into a fraction of its normal length, the sudden condensation generating an amount of heat amply sufficient to ignite the tinder. The piston-rod is at once withdrawn as quickly as possible and the tinder is found to be glowing, and a sulphured match may be lighted from it. In place of the brass cylinder and piston one of glass may be used, and the vapour of carbon bisulphide can be exploded by the compression, the flash being plainly visible through the glass.

Not only was this principle adapted for scientific illustration, but it was also applied to domestic use. Who was the first person to adapt the air-compression method for use in everyday life may never be known. We know, however, that its potentialities for utilitarian purposes were recognized not very long after the scientific interest had been roused. Among the specifications of English patents for the year 1807, there is one, dated February 5, number 3007, recording an invention by Richard Lorentz of 'an instrument for producing instantaneous fire'. The figure of this instrument is reproduced here (fig. 1), and the specification runs as follows:—

'The illustration shows the construction of my machine or instrument for producing instantaneous fire. *a* represents the cap

or head of a staff or stick, having therein a cavity or space for containing the prepared fungus known by the name of German tinder, or for containing common tinder of rags, or any other very combustible substance. *c* is the outer end of the rod of a syringe, which works by a piston in the upper part of the staff, and by a stroke of about twelve inches forces the common air with great velocity and in an highly condensed state through a small aperture against the combustible matter included in the head *a*, which is well screwed on against a shoulder or face armed with a collar of leathers. *b* is the hole for admitting common air when the piston is drawn quite back. The manner of working consists simply in pressing the end of the rod of the charged syringe strongly against the ground so as to drive the air suddenly on the tinder, and the cap *a* being without loss of time unscrewed the tinder is found to be on fire.'

It will be noted that this instrument differs in one important particular from the ordinary fire-piston of the physical laboratory. In the latter the air is merely compressed in the bottom of the cylinder, whereas in Lorentz's machine the air is not only compressed by the drive of the piston-rod, but it is also forced under high pressure through a minute duct beyond which the tinder lies. The term fire-*syringe*, so frequently applied to the various instruments for producing fire by air-compression, seems to be peculiarly suited to this form, since the air is forced through a duct at the end of the main cylinder-chamber, just as water is forced through the nozzle-duct of a squirt or syringe. No doubt the air, already heated by the compression, gains additional heat from the friction caused by its violent passage through the small duct. It is possible that this instrument owes its origin to the observation of the flash produced by the discharge of an air-gun, to which I have referred above, in addition to the scientific experiments as to heat generated by simple compression of air in a small space.

Fire-pistons in which the duct was omitted appear to have enjoyed some favour upon the Continent, and to a lesser degree in England, during the early third of the nineteenth century. In the *Mechanics' Magazine*, vol. xvii, 1832, p. 328, the following passage occurs :—

'The following is a sketch of a simple instrument for obtaining a light. As the invention though not new [It is very well known on the Continent by the name of the Instantaneous Light-giving Syringe. As it has not, however, been described in this work and may be new to some of our readers, we insert our correspondent's description.—*Editorial note*] is, perhaps, not generally known, I shall

be glad to see this description of it in your magazine . . . yours respectfully, E. J. MITCHELL, June 19, 1832.'

The description referring to the figures (fig. 2) I give in full. "AB is a brass cylinder, similar in appearance to a small brass cannon, having the hole rather better than $\frac{3}{8}$ of an inch in diameter, drilled true and clean rinsed. CD is the form of a piston to work in the cylinder, but unpacked. EF is the same ready packed with thick leather and fitted up for use. H is a circular brass nut, working against the screw to keep the packing tight. K is a small hook, fastened in a hole drilled through the nut H. C is the handle to the piston and is made of wood. The method of use is described as follows. 'Prepare some thin cotton rag (older and thinner the better) by steeping it in a solution of saltpetre, and drying it in a warm oven; tear a small piece off and place it on the hook K; introduce the piston EF into the cylinder AB a short distance only; then take the cylinder in the right (*sic*) hand, place it perpendicular upon the floor or a table, and strike the handle E with the ball of the right hand, so that the piston may rapidly descend to the bottom of AB, and being *suddenly* withdrawn, the tinder will be found on fire, and will light a common brimstone match. *Amadou*, or German tinder, which may be obtained at any of the principal druggists, is likewise a good tinder, but I prefer the rag steeped in saltpetre. E. J. M.' This instrument is of the simple air-compression kind, and, except for the piston-rod terminating in a hook instead of a hollow for the tinder, it is identical in principle with the most prevalent form of fire-piston.

In 1834 a notice occurs[1] of a French modification (fig. 3) of the type of instrument invented by Lorentz, referred to above, though from the following account it does not seem to have been very successful:—

'An attempt has been made in France to produce an instantaneous light by the compression of air. A strong tube A is furnished with a piston B, which may be driven rapidly from C to D by striking the knob E at the end of the piston-rod. The end of the tube, at D, is pierced with small holes to allow the air, when forced up by the piston, to pass into the hollow space G, in the piece F, screwed air-tight to the end of the tubes. When a light is wanted a bit of tinder is placed in the hollow, the top screwed on, and the piston driven in forcibly; on unscrewing the top the tinder

[1] *The Penny Magazine*, London, 1834, July 26, p. 286.

will be found ignited. Some modification of this instrument may be found useful, but in its present state it is inferior to the common tinder-box: it requires considerable strength, is equally slow in getting a light, requires a match to be lighted after the tinder has taken fire, and is easily put out of order.'

The method of squeezing the compressed air through ducts into a tinder-chamber is very similar to that patented by Lorentz. The loss of time caused by the necessity for unscrewing the tinder-receptacle after the tinder was ignited, must have militated against the efficiency of these *syringe*-like forms. As far as I am aware none of them have been preserved, and this may be an indication that they never were numerous or extensively used. Specimens of the simple fire-piston form occur sparingly in museums and private collections. An example from Bedminster, Bucks County, Pennsylvania, said to date about 1815–20, is mentioned by H. C. Mercer.[1] A specimen of brass from Gestrikland, or Helsingland, Sweden, is in the Nordiska Museum, Stockholm. Mr. E. Bidwell possesses three specimens, one of which (fig. 4) is entirely of brass and of large size, and resembles rather the modern instrument of the physical laboratory than the old domestic form. The tube is of thin brass, $8\frac{1}{2}$ inches long by $\frac{3}{8}$ inch in diameter. The other two (figs. 5 and 6), which may have been intended for domestic use, are smaller, of brass throughout, with the exception of the piston-rods, which are of steel. In one (fig. 5) the lower end of the piston-rod is packed with leather, while in the other (fig. 6) a brass piece accurately fitting the bore of the tube is screwed on, and no packing is required. All these have cup-like depressions at the end of the plunger for holding the tinder. Mr. Bidwell's specimens are all said to be English. It does not appear likely that the practical everyday use of these fire-pistons was at any time very general, and the tinder-box easily held its own against them, but it is worthy of note that a certain practical value was recognized for them, and even in quite recent years they were reintroduced in France, and a pocket form was sold by tobacconists in Paris. In these (fig. 7) the cylinder is of white metal with wooden knob, the plunger is of hard wood with cupped end, and fixed to the side of the cylinder is a tubular holder for the common cord tinder. A specimen given me by Mr. Miller Christy works very satisfactorily with a really 'quick' form of tinder. Its reintroduction in Western Europe was, no doubt, prompted rather by its peculiar interest as a

[1] *Light and Fire-making*, Philadelphia, 1898, p. 25.

scientific toy than by its being recognized as being of real practical importance. For ordinary purposes, as an appliance useful in everyday life, its death knell was sounded when the lucifer match became generally known. The latter, which has held its own unchallenged during the last seventy years or so, proved too strong and too severely practical a competitor, before which the time-honoured tinder-box, the fire-piston, and the earlier chemical methods ('sulphuric-acid bottle,' 'phosphorus bottle,' 'promethian,' &c.) had to give way.

The Fire-piston in the East.

Interesting as is this fire-producing appliance as it occurs in Western Europe in the form of a scientific instrument, and, to a limit extent, as a machine for domestic use, from an *ethnological* point of view, the interest of the fire-piston centres mainly upon its occurrence in the East in an environment of relatively low culture. The problem is to ascertain whether this peculiar and very specialized method of fire-production was introduced into the Oriental regions from Europe, or whether it was invented independently by the little-civilized peoples among whom it is found as an appliance of practical everyday use. Either theory is beset with difficulties, which are likely to remain unsolved in the absence of early records. I shall revert later to the consideration of this question, and will now deal with the geographical distribution and varieties of the fire-piston in Oriental regions. Briefly stated, it may be said that the range of this instrument extends sporadically over a wide area from Northern Burma and Siam through the Malay Peninsula and the Malayan Archipelago to its eastern limits in the Islands of Luzon and Mindanao in the Philippines.

Burma.—In this region the fire-piston is principally associated with the Kachin (Kachyen, Kakhyen, or Kakyen) people, and the forms vary as regards the materials used in their construction. The cylinders may be of bamboo, wood, or horn, the pistons or 'plungers' are either of wood or horn, or are made of a combination of both materials. In all, the heat is produced by simple compression of the air in the tube, and I have seen no examples in which the air is forced through a duct.

Four examples were collected for me by my friend Mr. H. E. Leveson from the Kachins, on the Chinese border of the Northern

Shan States (Lat. 24° 7′ N., Lon. 98° 15′ E.), nearly due east of Bhamo. These are interesting on account of their rude and simple structure. Each (figs. 8, 9, 10) consists of a *natural* tube of stout-walled bamboo, closed near the lower end by a natural node. The 'plunger' is of wood, with large roughly-shaped head. One of the heads is hexagonal, each facet being decorated with chip-carving (fig. 10). The lower end is cupped to form a receptacle for the tinder, and is packed with fine thread coated with wax (?). Two very similar specimens from the Shans of Upper Burma are in the Ethnological Museum at Cambridge.

A better made example, though still composed of the same materials (fig. 11), was collected for me by Mr. Leveson from the Wa villagers in East Manglün (Mong-lem), on the Chinese frontier, 22° 20′ N., 99° 10′ E. The bamboo tube is neatly finished off, and the 'plunger' is of very hard wood, with exceptionally large head accurately shaped. Another specimen in my possession (fig. 12) having a cylinder of bamboo is somewhat more pretentious, the cylinder being carved in a decorative form; the wooden 'plunger' is unusually long and tapering. This example was obtained by Mr. Frank Atlay at the Ruby Mines, Mogok, and kindly given to me. A small cloth bag containing vegetable-floss tinder belongs to this specimen, with which I have been able to produce fire with considerable ease on many occasions.

In the Ethnological Museum at Rome are several very rudely constructed examples of wood and horn, collected by Leonardo Fea from the Kachins (Cowlie Kachins) and Shans in the neighbourhood of Bhamo, chiefly to the east of that town. These (figs. 13, 14, 15, 16) differ in some respects from the types most commonly seen from Burma. In all of them the cylinder is of stout buffalo-horn, either light or dark coloured, cut from the solid tip of the horn. In two of them (fig. 13) a pair of flanges are raised upon the surface near the top, and a carrying cord is knotted through these flanges. A similar pair of perforated flanges appear on a specimen in the British Museum. In these two examples the 'plunger' is of hard wood, with expanded head cut from the solid (fig. 13). A third specimen has a piston, with wide head cut from one solid piece of dark horn. Three others (figs. 14, 15, 16) and a fourth specimen (fig. 17) from the same district, given me by Professor E. H. Giglioli, are peculiar in having the shaft of the plunger of horn, while the head is of wood fixed by means of a stout *rivet* of horn to the shaft, which is widened at this

point, and is tenoned into the head. The head in some consists of a single piece of wood, in others it is in two pieces, and is reinforced with bindings of string and cane. The riveted head seems to be specially associated with the Kachins. The collector gives the native name of the instrument as *caifo* or *caifoe*, and he adds the remark that while these people are called Kachin by the Burmese, they describe themselves as Chimfo or Simpfo (i. e. 'men'); the name is also given as Chingpaw.[1]

A specimen (fig. 18) in my collection, obtained by Mr. Leveson from a Kachin on the Chinese border, from the same district whence the ruder bamboo specimens were procured, has a cylinder of rough horn of a light colour and a plunger, also very roughly made of black horn. Reference is also made by Capt. W. Gill[2] to the fire-piston (with wooden cylinder) amongst the Kachins of the village of Pung-shi (Ponsee), on the Taiping River, fifty or sixty miles east of Bhamo. John Anderson[3] describes and figures the instrument from the Kachins of the same region; it resembles that shown in fig. 18.

Other specimens of the Kachin fire-piston of which I have record are as follows:—

2 examples with plain horn cylinders, Berlin Museum.

1 (referred to above) with horn cylinder, 8·7 cm. long, having perforated flanges for a carrying cord; 'plunger' of hard wood riveted to rounded wooden head; given by Mr. R. Gordon to the British Museum in 1873.

1 given by Mr. R. Gordon to the Mayer collection, Liverpool Museum, 1874.

1 of wood, Horniman Museum.

1 with tapering cylinder of horn and wooden 'plunger', in Mr. E. Bidwell's collection.

1 with tapering horn cylinder, 7·5 cm. long, piston of horn tenoned into a cubical wooden head and secured with a rivet; given by Sir W. N. Geary to the British Museum, 1901.

[1] H. J. Wehrli, *Internat. Archiv f. Ethnographie*, suppl. to vol. xvi, 1904, p. 45. See also L. Fea, *Quattro Anni fra i Birmanni e le tribù limitrofe*, and E. C. J. George, *Memoirs on the Tribes inhabiting the Kachin Hills*, Census of 1892, Burma Report, i, appendices.

[2] *The River of Golden Sand*, 1880, vol. ii, p. 395.

[3] *Mandalay to Momien*, 1876, p. 134, and plate, figs. 3 and 4.

1 with cylinder of horn, 8·6 cm. long, tapering upwards, cut in nine longitudinal facets, and with ring of carving round the base; plunger of hard wood with the head capped with silk wrapping; native name, *mi-put*; given by Captain R. C. Temple to the Pitt-Rivers Museum, Oxford, 1890 (fig. 19).

1 small though elaborate specimen of black horn throughout, apparently lathe-turned, the cylinder ornamentally shaped, and reinforced at the end with metal bands, as is also the rounded head of the 'plunger'; from the cylinder hang three strings, one carrying a small velvet bag of vegetable-floss tinder, another a small nut-shell containing grease for lubricating the packing of the piston, the third a small ivory spatula for spreading the grease (fig. 20); given by Major R. C. Temple to the Pitt-Rivers Museum, 1894.

From Mandalay, and probably of Kachin origin, I have in my possession a specimen very similar to the last, of black horn throughout, lathe-turned, the head of the piston riveted to the end of the shaft; with bag of vegetable-floss tinder, and small, spherical wooden grease-box (fig. 21); given to me by the collector, Mr. H. O. Mordaunt, in 1899.

A sketch (fig. 22) of an elaborately carved fire-piston seen in Mogok, 1893, was made for me by Mr. Donald Gunn. The decorative treatment of this specimen is unusually elaborate. The native name is given as *mizoon*.

Two examples, locally called *mi-put*, collected in the Southern Shan States, were given me by Mr. H. E. Leveson in 1890 and 1891. Of these, one (fig. 23) is quite plain, with long cylinder of hard wood, and piston of buffalo horn with large rounded knob. It was obtained from a *pungi*, or priest in a monastery (*kyaung*). The other (fig. 24) is entirely of buffalo horn, the cylinder gracefully fluted in eight facets; the plunger is elegantly tapered, and has a rounded head inlaid with small metal studs. The depth of the bore in the cylinder is only 4·5 cm., the cylinder itself being 8·3 cm. long. This gives a very limited play to the piston, rendering the operation of fire-producing a somewhat difficult one. Belonging to this specimen are a tinder-pouch of palm-spathe and a turned-wood box for grease (fig. 24 *a*).

Further still towards the south a specimen was seen by Prof. A. Bastian, in a monastery in Shwegyin, which lies near the mouth

of the Poung-loung River in Pegu. The tube was of ivory.[1] A similar specimen was made for him by a native.

It would appear that the westerly limit of distribution of fire-pistons in Burma is bounded by the Irrawaddy River, while they extend in a north and south direction from the neighbourhood of Bhamo to Rangoon. To the north-east they extend some distance across the Chinese frontier, amongst the eastern Kachins and peoples of mixed Kachin blood. On the eastern side of Burma they are found in both the Northern and Southern Shan States.

French Indo-China. A fire-piston (fig. 25) in the Edinburgh Museum was obtained from the Khas (or Kumuks), an aboriginal hill tribe of low stature, inhabiting the country north of Luang Prabang, which lies on the Mekong River in Lat. 20° N. It is entirely of horn : the cylinder is carved in an ornamental moulding at either end. The piston has a knobbed head coated, apparently, with some kind of composition. A bag of cloth serves as a tinder-pouch (fig. 25 *a*).

Further to the south-east, the implement is again met with amongst the Moïs, a people of very low culture inhabiting the table-lands and mountains between the Mekong River and the coast of Annam, from the frontier of Yunnan to Cochin China. They differ racially from the Annamese and Thai, and are said by Deniker[2] to belong probably to the 'Indonesian' stock. A. Gautier describes[3] the instrument as having a cylinder of hard wood, with a bore of 7 to 8 cm. in depth, and 7 to 8 mm. in diameter. The piston, also of wood, has a large, rounded knob, and is cupped at the lower end for the tinder in the usual way. The tinder (*amadou*) is kept in a hard fruit-shell hollowed out. The native moistens the end of the piston in his mouth, so as to lubricate it, and also to make the small piece of tinder adhere to the cupped hollow. Apparently the instrument is in constant use amongst the Moïs.

Malay Peninsula. John Cameron frequently saw the fire-piston in use amongst the Malays of the Straits, prior to 1865. He writes,[4] 'There is one peculiarity which I will mention, as it might, I think,

[1] Bastian, *Die Voelker des Oestlichen Asien*, 1866, ii, p. 418.

[2] *Races of Man*, p. 392.

[3] 'Étude sur les Moïs,' *Bull. de la Société de Géographie Commerciale du Havre*, 1902, pp. 95 and 177.

[4] *Our Tropical Possessions in Malayan India*, 1865, p. 136.

be capable of improved application at home; it is the method adopted by some of obtaining fire. It is true that this is not the usual method, nor do I remember to have seen it alluded to by any other writer; I have witnessed it, nevertheless, repeatedly availed of by the Malays of the Straits; and in some of the islands to the eastward of Java, where I first saw it, it is in constant use. A small piece of horn or hard wood about three or four inches long, and three-quarters of an inch in diameter, is carefully bored through the centre for three-fourths of its length, with a hole about a quarter of an inch in diameter. To fit this, a sort of ramrod or piston of hard wood is made, loose all along, but padded with thread or cotton at the point, so as to be as nearly air-tight as possible, when placed into the hole of the little cylinder. . . . When used, the cylinder is held firmly in the fist of the left hand; a small piece of tinder, generally dried fungus, is placed in a cavity on the point of the piston, which is then just entered into the mouth of the bore; with a sudden stroke of the right hand the piston is forced up the bore, from which it rebounds slightly back with the elasticity of the compressed air, and on being plucked out, which it must be instantly, the tinder is found to be lighted. . . . I can only attribute the light produced to the sudden and powerful compression of the air in the bore of the cylinder.'

This description of the method of using the fire-piston applies practically to all Oriental examples. The record is interesting as being an early reference to the use of the instrument in the Peninsula, and also in the Eastern Malayan Archipelago.

Turning now to more recent records of the occurrence of fire-pistons in the Peninsula, I may give the following first-hand information, which I owe largely to Mr. W. W. Skeat and to Mr. Nelson Annandale, who have done so much for the ethnology of this region.

Mr. Annandale, in 1901, saw the instrument in regular use at and in the neighbourhood of Ban Sai Kau, a village in the State of Nawnchik (called Toyan by the Malays), the most northerly of the Siamese Malay States, west of the Patani River. The Siamese name of the fire-piston is *lek phai tok*, the Malayan name is *gobi api*. It is there chiefly used for lighting cigarettes in the jungle, as the spark is not easily extinguished by high winds. One specimen from this village, given me by Mr. Annandale (fig. 26), is of very small size, the cylinder being only 5·7 cm. in length and the bore 4·5 cm. It is

entirely of black horn; the cylinder is ornamentally, though roughly, turned, barrel-shaped in the centre, and tapered to a blunt point at the lower extremity. The piston has a plain, rounded knob at the top, and the usual hollow for tinder at the other end. A specimen obtained there by Mr. Robinson for 5 cents is very similar in shape and size, though somewhat better made. A third specimen from the same locality (fig. 27), collected by Mr. Annandale for the Pitt-Rivers Museum, has a very elegantly lathe-turned and slightly engraved cylinder of horn; the piston is of light wood with a turned knob of horn through which it is fixed with an adhesive.

From further south, in the State of Patani, Mr. Skeat procured three examples very similar in shape to those of Nawnchik, these are in the Cambridge Museum. One of them is very small (fig. 28), with horn cylinder and wooden piston; the depth of the bore is only 3 cm. A second has a lathe-turned horn cylinder and a piston of hard wood with ivory head, depth of bore 3·7 cm. The third (fig. 29) is larger somewhat, with lathe-turned cylinder of bone and wooden piston; depth of bore 5·5 cm. All three were obtained in Jalor (Jala), one of the seven districts of Patani, some thirty miles up the Patani River. The Malay name given by Mr. Skeat is *gobek api* (lit. 'fire-piston'). The word *gobek* is that usually applied to the piston (pestle and mortar) used by old and toothless men for crushing up the *betel*-leaf; *api* in Malayan means 'fire'. The tinder, *rabok*, is usually the fluffy substance obtained from the leaf-bases of the *tukas* palm (*Caryota Griffithii*), though occasionally it is obtained from other kinds of palm, or from rattan. Mr. Skeat tells me that the fire-piston occurs throughout the interior of the old Malay state of Patani, in other words, the sub-districts of Jala, Ligeh, Biserat, and Rhaman, and he also mentions that there is a probable extension northward and eastward into more distinctly Siamese territory. His specimens are practically identical with those obtained by Messrs. Annandale and Robinson in Nawnchik.

Mr. Annandale procured for the Pitt-Rivers Museum an example from the Samsam (i.e. Siamesing-Malay) village of Ban Phra Muang in Trang, on the west coast, *c.* 7° 25′ N., 99° 30′ E. This is the most northerly district in the Peninsula from which I have definite record of a fire-piston. This specimen (fig. 30) has a cylinder of light-coloured horn, pointed and ringed below, as usual in the Peninsula, the upper half roughly bound round with string coated with black wax. The piston is of black horn with

rounded, carved knob, which is hollowed out as a receptacle for holding the supply of tinder. The depth of bore is 5·5 cm.

There are specimens in the Taiping Museum from the province of Perak, on the western side of the Peninsula, but their exact locality is not specified, and I have no descriptions of them as yet.

An interesting aberrant type (fig. 31), now in the British Museum, was sent to Mr. F. W. Rudler in 1893 by Mr. Henry Louis. It was obtained by the latter in 1890 when in camp on a little stream known as Ayer Katiah, a tributary to the Teluban River. Presumably this is the Telubin River in the Siamese States of Saiburi or Telubin, the next river down the coast after the Patani River. In this the cylinder is of wood, 6·4 cm. long, neatly bound round with bands of plaited cane. The lower end is rounded off, instead of terminating in the point so characteristic of the Peninsula. The piston, of hard wood, is very short, and has a large, roughly-carved head. The packing is of pale vegetable fibre. A large bean-shell serves as a tinder-box: it appears to be an *entada* bean (fig. 31 *a*). Mr. Louis related that a party of Malays came down from some neighbouring *kampongs* (i.e. villages), and squatting down in camp, began to smoke, when one of the party, a young man, in the most matter-of-fact way, took out his fire-piston and lit his cigarette. The particulars were kindly sent to me by Mr. Rudler.

It will be seen that the distribution of the fire-piston is a very wide one in the Malay Peninsula, where it is found in the hands of both Malay and Siamese people, as well as among the mixed Siamese-Malays. The question arises whether the instrument is originally Malayan or Siamese. I have consulted Mr. Annandale and Mr. Skeat upon this point, and both are inclined to regard it as of Siamese origin. The former writes to me as follows: 'With regard to the *gobi api*, it is, so far as I am aware, a purely Siamese implement. I have never seen or heard of it in a purely Malay community. . . . There are specimens from Perak in the Taiping Museum, but their exact locality is not recorded, and even within a few miles of Taiping there is a large Samsam village, while the people of Upper Perak are indistinguishable from those of Rhaman and Kedah, being physically as much Siamese as Malay.' Mr. Skeat informs me that, although the specimens which he obtained in Jalor were used by Malays, he is inclined to think that they are borrowed from the Siamese (or Siamesing-Malays), who appear to use them much more than the Malays do. 'There are a good many Siamese

and Samsams (i.e. Siamesing-Malays) in the district, and it is to their influence that I am inclined to attribute these fire-utensils.' Again he writes, 'I have a strong belief that this particular object is Siamese, because it appeared to die out as we worked south into the more exclusively Malay districts, and I never came across any specimen of it in Kelantan or Trengganu (which are substantially Malay districts), any more than I did on the west coast, where Siamese influence was equally at a discount. My recollection is quite clear on the point that at Biserat in Jalor the fire-piston was used by the Siamese more commonly than by the Malays, who appeared to have borrowed the idea from them.'

I have not as yet seen or heard of any specimens of the fire-piston from Siam proper, but it would be most interesting to know if they have been used there, and also to learn the details of their form, so that we may ascertain whether the types of the Burmese region can be linked by intermediate varieties with those of the Malay Peninsula.

I must now turn to the distribution of this interesting fire-making appliance beyond the southern limits of the Peninsula.

Sumatra.—Van Hasselt [1] mentions the use of the fire-piston by the Menangkabo Malays in the hinterland of Padang, on the west side of the island. The specimen which he describes (fig. 32) is of 'karbouw' (buffalo) horn, and its native name is *tjatoew api bǎlantaq*. In form it reminds one of some Kachin types. Its size is large, and the plain surfaces of both cylinder and piston-head are relieved with ring marks. The tinder, *raboewq* (cf. *rabok* in Jalor), is obtained from the *anau* palm. This specimen was obtained at Soepajang.

There is a specimen in the Berlin Museum from Padang on the west coast, but of this I have not full particulars.

Mr. R. T. Pritchett figures [2] an ornate example from Sumatra (fig. 33); he does not, however, specify the material or the size.

There is a very fine specimen in the British Museum (fig. 34) which was collected by Carl Bock at Fort van de Capelle, Padang province, Sumatra. This example is elaborately carved out of horn. The cylinder is 8·2 cm. long and tapers slightly from above; it is decorated with bands of carving. The piston has a carved head which is surmounted by a well-shaped, rounded receptacle for tinder.

[1] Veth, *Midden Sumatra*, iii, p. 177, and pl. lxxxiii, figs. 12 and 13.

[2] *Smokiana*, 1890, p. 97.

This is very neatly fitted with a cap or lid which fits into the opening like a stopper, and is furnished on one side with a small projecting spur; in closing the lid this spur passes through a slot in the rim of the tinder-receptacle, and a half-turn secures the lid in position (fig. 34 *a*). The name of this instrument is given as *tanar datar*, but it seems possible that there has been some confusion with Tanah Datar, the name of a place. At least this name requires verification.

Borneo—Sarawak.—In this island the fire-piston is found principally in the hands of Malays and Sea Dayaks of Sarawak. In 1865, F. Boyle described [1] it as used by some of the Dayak tribes, and expressed much astonishment at the singular method of procuring fire. His description is evidently erroneous, but he adds, 'I must observe that we never saw this singular method in use, though the officers of the *Rajah* seemed acquainted with it.' He refers to lead being used as a material in making the instruments, and adds that 'the natives say that no metal but lead will produce the effect'.

Charles Brooke, in 1866,[2] writes as follows: 'There is a method . . . used by the Saribus and Sakarang Dyaks for obtaining fire, which is peculiarly artistic, and from what direction such a practice could have been inherited is beyond my ken. The instrument is a small metal tube, about three inches long, closed at one end, with a separate piston, the bottom of which fits closely into the tube, and when some dried stuff answering the purpose of tinder is introduced, and the piston slapped suddenly down, the head of it being held in the palm of the hand in order to withdraw it as quickly as possible with a jerk, fire is by this means communicated to the tinder in the tube. The Dyaks call the instrument "besi api".'

W. M. Crocker asserts [3] that the fire-piston is 'found amongst the Saribus Dyaks only. Here we have a small brass tube lined with lead: no other metal, the natives say, would produce the same result. A small wooden plunger is made to fit the tube, the end of which is hollowed out in the shape of a small cup, in which is placed the tinder.'

[1] *Adventures among the Dyaks of Borneo*, 1865, p. 67.
[2] *Ten Years in Sarawak*, 1866, p. 50.
[3] *Journ. Anthrop. Inst.*, xv, 1886, p. 426.

W. H. Furness also describes and figures[1] an example with lead-lined brass cylinder and wooden piston, from the Saribas Ibans (Sea Dayaks), and in the British Museum there are two specimens from the Saribas district, also Sea Dayak. One was presented by Mr. G. D. Haviland in 1894, the other by Mr. Charles Hose. Both instruments have cylinders of lead-lined brass, 9 cm. and 9·8 cm. long, and pistons of hard wood. Mr. Hose's specimen has attached to it a bamboo box for tinder, the other has a tinder-holder of *canarium* nut-shell and also a small cleaning-rod of cane and a metal spatula (? for grease). *Besi api* and *gochoh api* are given as the native names. These two examples closely resemble a specimen (fig. 35) presented by Mr. D. I. S. Bailey to the Pitt-Rivers Museum in 1904. It came from the Sea Dayaks of Simanggang, near Saribas. In structure it is identical with the others, and it has a tinder-box of *canarium* nut and a brass pricker attached to it. Dr. A. C. Haddon brought back a very similar Saribas Dayak specimen, *guchu api*. Another example of the same form in the Kuching Museum, said to be from the *Kayans* but doubtless of Sea Dayak origin, is figured by both Lady Brassey[2] and R. T. Pritchett.[3]

Another type of fire-piston in Sarawak differs from the above only in the fact of the cylinder being made of lead alone, instead of the lead being merely a lining to a brass tube. Mr. D. I. S. Bailey presented a specimen of this kind to the Pitt-Rivers Museum in 1904 (fig. 36). The cylinder has been cast evidently in a two-piece mould of bamboo, and is composed of a mixture of lead and tin. It is decorated with simple relief designs. The piston is of wood. Attached to the cylinder are a tinder-box of *entada* bean full of palm-scurf tinder, and also a brass-wire pricker. It is a Sea Dayak specimen from Simanggang.

A nearly identical specimen was given to the Pitt-Rivers Museum in 1889 by Mr. S. B. J. Skertchley. It was made by a Kalaka (? Kalukah) native from the western part of Sarawak, not very far from the Saribas and Simanggang districts. Mr. Skertchley gives a detailed account of the instrument, to which I will refer readers for full details, and also an excellent figure.[4] The instrument itself, *besi api*, resembles the last in all essential details; a bamboo tinder-box with palm-scurf tinder, a cleaning-rod of cane, and one

[1] *Home Life of the Borneo Head-hunters*, 1907, p. 170.
[2] *The Last Voyage*, 1887, p. 148. [3] *Smokiana*, 1890, p. 97.
[4] *Journ. Anthrop. Inst.*, xix, 1890, pp. 445–8, and pl xi, fig. 1.

half of a bamboo casting-mould accompany the specimen. Mr. Skertchley says that the metal of the cylinder is composed of two parts lead to one of tin. 'It is cast in a bamboo mould. . . . The mould is a thin piece of bamboo, split lengthwise, on the interior of which the ornamental bands, &c., are incised. A piece of flat wood, plank by preference, has a hole made in it the size of the bore. Through this hole a rotan is pushed, which also passes through a lump of clay tempered with sand stuck on the upper surface of the plank. The rotan projects beyond the clay to a distance somewhat greater than the length of the cylinder. The mould, bound together with split rotan, is placed centrally and vertically over the projecting rotan, thus forming a box closed below with clay, open at the top, and having a rotan in the centre. Into this the molten metal is poured. When cool the rotan is withdrawn, the mould open, and the cylinder is complete. A good mould will make three or four castings, but, as a rule, the first destroys it. The measurements of the cylinder are:—length, $3\frac{1}{4}$ inches; width, $\frac{1}{2}$ inch; bore, $\frac{3}{8}$ inch. This is the average size; larger ones do not work well, smaller ones are of no use.'

British North Borneo.—The only actual specimen which I have from British North Borneo is one (fig. 37) which was sent in 1890 by Mr. L. P. Beaufort, who collected it on the west coast, to Sir R. Biddulph Martin, who has very kindly given it to me. It is quite a remarkable and specialized form, unlike any other which I have seen from any part of the East. As in the last-mentioned examples from Sarawak, the cylinder is of lead, or possibly lead and tin, cast in a bivalve bamboo mould, and decorated at the lower end with faintly raised, foliated designs, and at the upper end with punched or incised zigzags. The great peculiarity of this example lies in the form of the lower end of the cylinder. The base, instead of being flat or rounded, is of unsymmetrical form and concave, and just above this is a broad, rounded notch on one side. From this notch *a perforated duct communicates with the bottom of the bore of the cylinder*, very much after the fashion of the touch-hole and fire-duct of an early muzzle-loading cannon. The presence of this duct is a most peculiar feature, and its *raison d'être* is not readily accounted for. It certainly recalls to one's mind those early European and English forms, in which the air is violently driven through holes, to which I have already referred, and it has occurred to both Mr. Miller Christy and

myself that, possibly, the tinder was held in the outside notch against the small orifice, through which the air was violently driven in a compressed state by the piston, the friction due to passing through the small duct being largely responsible for the production of heat. At the same time I am disinclined to think that this was the case. The duct is, to my mind, *far too large* for the purpose, and it does not appear to have been enlarged at all since it was first made; through such a duct the air would escape so easily and quickly when forced through by the piston that there would be very little compression or friction, and, consequently, very little rise of temperature. The tinder, moreover, would almost certainly be blown away. It seems to me more likely that the tinder was placed, as usual, on the end of the piston (which is, indeed, hollowed out, cup-wise, in the usual manner, evidently with this intention), and that when the piston was driven forcibly downwards, the small orifice of the duct was tightly closed by a finger which would lie comfortably in the rounded notch. This would allow the air to be compressed, as the cylinder would thus be, temporarily, a *closed* one. At the end of the piston stroke, when the tinder was ignited, the finger would be raised, thus opening the duct, and, in addition to the piston being more readily and quickly withdrawn, through no vacuum being formed, the air from the outside, which would rush in through the open duct owing to the *suction* of the piston, would actually blow up the tinder into a higher state of incandescence, rendering it unnecessary to blow upon it after removal from the cylinder. I offer this theory as a possible solution of the mystery of this peculiar type, though as yet I have not been able to conduct experiments in order to see if such a process would act efficiently. The piston of this specimen is of wood, and presents the peculiarity of the cupped end having been capped with lead. This lead capping is damaged, and it is not easy to see whether it was intended to take the place of a packing or whether it was supplementary to the more usual packing of thread. No trace of thread packing is to be seen, though a sunken groove near the end of the pistons seems to be designed for holding some kind of packing wound round at this point. Mr. Beaufort told Sir R. B. Martin that fire-pistons were becoming very difficult to obtain in British North Borneo, where they are confined to the west coast. He also added that 'the better ones are made of *wood*'.[1]

[1] *Journ. Anthrop. Inst.*, xx, 1891, p. 331.

The only example made of wood from Borneo is one figured by C. M. Pleyte,[1] and, although this is not so stated, it seems likely that this may have come from British North Borneo. It is (fig. 38) quite plain, and differs in external detail from examples from Sarawak.

In regard to the general question of the presence of the fire-piston in Borneo, it appears to be confined to an area extending from the westerly portions of Sarawak to the western coast of British North Borneo, though there is a wide hiatus in the distribution between these two regions. It is only found on or comparatively near the coast, where there is a strong admixture with the Malay element, and where Malayan culture is very evident. Both Mr. C. Hose and Mr. R. Shelford are strongly of opinion that this instrument has been introduced by the Malays, from whom the Sea Dayaks have borrowed it in comparatively recent times. Mr. Shelford wrote to me in answer to my inquiries that 'the Malays and Sea Dayaks of the Saribas River were at one time associated a good deal in piracy, &c., and there was a good deal of intermarrying; at the present day the "Orang Saribas" have more of the Malay in them than any other tribe of Sea Dayaks, and, as far as I can make out, they are the only tribe who know the use of the *chelop* (i. e. fire-piston)'. The latter remark leaves out of consideration the occurrence of the implement in British North Borneo; but there, too, Malayan culture is not lacking on the coast, and it is likely that the forms found there, which differ from the Sea Dayak forms of Sarawak, are traceable to the same Malayan origin, the difference in type being due either to variation within the district or to different types of the instrument having been introduced by the Malays. The use of lead as a material is peculiar to Borneo, and it is possible that this may be a character developed in the island itself, unless the Malays may have themselves used this metal and introduced its use with the instrument itself. Of this there appears so far to be no record. There is no Siamese influence in Borneo, so that the direct influence of Siamese culture from the Malay Peninsula is quite improbable.

Java.—Fire-pistons, though now scarce in Java, range over a wide area of the island. They are apparently always made throughout of buffalo-horn; at least, all the specimens I have seen or know of are of this material.

[1] *Globus*, lix, pt. iv, p. 3 (of reprint), fig. 7.

A good, well-made specimen in my possession (fig. 39), of black horn carefully polished, has a cigar-shaped cylinder, with two bands of ornamental engraving. The piston terminates in a large rounded head, which is fixed to it with a horn rivet. This knob or piston-head is hollowed out, and serves as a receptacle for tinder, which consists of a brown palm-scurf. The specimen was obtained in Buitenzorg in the west of Java. This shape appears to be a characteristic one. Mr. C. M. Pleyte, of Leiden, had several examples of this form from Bogor, one of which is now in the Edinburgh Museum; these are almost identical with my specimen. In the museum at Rotterdam there is a horn fire-piston from Java, but I do not know if its shape is the same as the above. In the Cambridge Museum may be seen a specimen from Kadiri (Kediri), in which the cylinder is shorter and terminates in a small projecting knob. It is ringed all over with transverse, incised lines (fig. 40). A different type again is figured by C. M. Pleyte,[1] in which the horn cylinder tapers from below upwards, the base being broad and cut off square. The knob on the piston is hollowed for containing tinder, and is furnished with a lid which fits over a flange (fig. 41). In the same article Pleyte refers[2] to a Sundanese fire-piston (West Java) called *tjĕlĕtok*. The form of this is, unfortunately, not described. He says that *tjĕlĕtok* is from the root word *tjetok* = Malay *tjatok*; *mentjatok* = struck down quickly or with force. The word is the same as *tjatoew* given as the Malayan name of the instrument in Sumatra.

Flores.—From this island there is a fire-piston in the Vienna Museum (fig. 42). It is made of horn, and is peculiar in having a rounded receptacle for tinder at the lower end of the cylinder, instead of in the knob of the piston.

John Cameron says, as quoted above, that prior to 1865 he saw the fire-piston in use in some of the islands to the eastward of Java, so that we may assume that other islands in the neighbourhood of Flores possessed the instrument at that time. He, unfortunately, does not specify the localities.

Philippine Islands.—The fire-piston as it occurs in the Philippines appears to be restricted mainly to the wild non-Negrito tribes

[1] *Globus*, lix, pt. iv, p. 3 (of reprint).

[2] Quoting the catalogue of the Bataviaasche Genootschap van Kunsten en Wetenschappen, p. 56, no. 1120.

of north central Luzon, where it is used by natives of the so-called 'Indonesian' group. It is also recorded from Mindanao, however. H. Savage Landor says,[1] 'This instrument called *Bantin*, generally made of carabao horn, is found among various tribes of North Luzon, and also in South Luzon, among the curly-headed Aetas of the Gulf of Ragay. . . .' He does not specify the particular tribes in the north, and it is unfortunate that he does not say if his information regarding the Aetas is first-hand or not. I have found no other references to fire-pistons among tribes of Negrito stock, and further information is required on this point. A. E. Jenks remarks[2] that 'the fire-syringe, common west of Bontoc Province among the Tinguian, is not known in the Bontoc culture area'. Others extend the distribution into the Bontoc area, and beyond it into the more central portions of the interior of North Luzon. Dr. Schadenberg mentions[3] their use by the Bontoc people, and describes the cylinder as of *carabao* (buffalo) horn-tip, *c.* 9 cm. long, with a bore of about 1 cm. The fire-piston, together with a box for grease and tinder of charred cotton, is carried in a pouch woven from *bejuco*. He adds that the natives value them very greatly and require a high equivalent in exchange.

In the Dresden Museum there are two specimens. Of these, one, from the Igorrotes of Bontoc (fig. 43), has a cylinder of wood tapering from below upwards; the other (fig. 44), from the Igorrotes of Tiagan, is very similar but is made of horn. Each has a separate tinder-holder of bamboo.[4] Another Igorrote example (fig. 45), collected by Dr. Alexander Schadenberg, is in the Vienna Museum. The cylinder is of *carabao* horn and the piston of wood; the tinder of cotton is contained in a bamboo holder. The collector refers to the use of the instrument among the Igorrotes of Tiagan, Lepanto, and Bontoc. F. H. Sawyer[5] gives the Igorrote name of the fire-piston as *pamiguin*. *Sulpakan* is mentioned as the native name of a specimen from Luzon in the Berlin Museum. A Tinguian speci-

[1] *Gems of the East*, 1904, ii, p. 334.

[2] *The Bontok Igorrot*, Manila, 1905, p. 134. (Department of the Interior, Ethnol. Survey Publications, vol. i.)

[3] *Verhandl. d. Berliner Gesell. f. Anthrop.*, 1886, p. [551], in *Zeit. f. Ethnol.*, vol. xviii.

[4] *Publicationen aus dem Kgl. Ethnog. Museum zu Dresden*, by A. B. Meyer and A. Schadenberg, viii, *Die Philippinen*. 1. *Nord Luzon*, 1890, p. 21, and pl. xvii, figs. 18 and 19.

[5] *The Inhabitants of the Philippines*, 1900, p. 266.

men is in the latter museum. In the Ethnological Museum at Rome there is a fire-piston from the Calinga tribe in the province of Nueva Vizcaya, collected by José Mª de Mourin, 1893 (fig. 46). The horn cylinder is longitudinally faceted and transversely ringed at either end. The piston is of wood. D. C. Worcester mentions[1] examples made of buffalo-horn from the wild tribes of North Luzon. He adds: 'To perform this operation successfully requires long practice. I have yet to see a white man who professes to be able to do it. . . . How the savages first came to think of getting fire in such a way is, to me, a mystery.' I may assure him that the process of procuring fire by this means is quite easy, provided that the bore of the cylinder is true and the piston carefully packed. In Mr. Edward Bidwell's collection there is an example (fig. 47) from Luzon with horn cylinder and wooden piston, made very plainly. Mr. Landor[2] says that in the more elaborate fire-pistons from Luzon 'a receptacle for the tinder balls is to be found and a metal spoon attached'.

Lastly, there is a reference to the fire-piston in Mindanao, the southern island of the Philippine group. F. H. Sawyer mentions[3] it as being used by the Mouteses or Buquidnones in that island.

Origin and Dispersal.

Having given as far as my present information admits a description of the geographical distribution and varieties of the fire-piston, let me now turn to the more difficult though perhaps more interesting side of my subject. The question arises, What do we learn as to the history of this instrument from its distribution?

The two regions in which it occurs are very widely separated, both geographically and culturally. On the one hand, we have Western Europe and England as a home of the fire-piston in an environment of the highest culture; on the other hand, we find it occurring over a very wide but very connected area in the East, amongst peoples relatively low in the scale of civilization. The primary question requiring solution is whether the fire-piston has been *transmitted* from the one geographical area to the other, or whether it was *independently* arrived at in the two regions. We know that the principle of the method of producing heat by compression of air was discovered in England and France by scientific

[1] *The Philippine Islands*, 1898, p. 297. [2] *Op. cit.*
[3] *Op. cit.*, p. 345.

experiment, and that this principle was to some extent adapted to domestic use there, by the invention of the fire-piston, so that it is at least clear that the European form was not derived from the East. Was, then, the Eastern instrument a derivative from the Western? This question is not easily answered. On the one hand, the difficulty of explaining how native peoples, in a comparatively low condition of culture, could possibly have arrived independently at the knowledge requisite for the invention of this method of fire production is so great as almost to compel the belief that the instrument *must* have been introduced from elsewhere by some more highly cultured race. It must be remembered that it is only 100 years ago last February that the first English patent was taken out by Lorentz for a fire-piston, and that the scientific knowledge of this method of obtaining a spark dates only from a very few years earlier. This, among a people in the highest state of civilization and of scientific advancement. It seems almost incredible that so delicate and far from obvious a method can have been discovered, whether by accident or by gradual development, by any of the Eastern peoples amongst whom it has been found in use. At the same time, it must be admitted that this is the *only* serious difficulty which lies in the way of admitting the possibility of an independent origin in the two main regions of distribution. There is no inherent impossibility in such a double origin; cases of independent invention of similar appliances in widely separated regions having frequently arisen. There is no record of introduction by Europeans.

There are, furthermore, considerable difficulties in accounting for the dispersal of the fire-piston in the East, under the theory of its original introduction from Europe. From the earlier references we learn that prior to 1865 the fire-piston was already well known in the East over a very extensive geographical area, embracing Burma, the Malay Peninsula, Borneo, and the 'islands to the eastward of Java'. This is a wide range of distribution, and it would seem probable that considerable time would be required to account for this extensive dispersal, even if the instrument had been introduced by travellers from the West. If we choose to conjure up a picture of enterprising European voyagers in the earlier half of last century depositing supplies of fire-pistons in various islands of the Malay Archipelago and on the mainland of S.E. Asia, we must also allow for the time which must have elapsed before due

appreciation of the value and potentialities of the new machine would have been developed in peoples to whom its principle was hitherto absolutely unknown. We must also allow for a still longer period during which the difficulties of making imitations of the European instrument by *native* methods were gradually overcome; for we must bear in mind that, simple and few as are the essential elements which together form the fire-piston, it is only when they are in *perfect adjustment* that the instrument will work effectively and produce the desired result. To this extent the fire-piston is essentially a delicate instrument; an imperfect bore, faulty packing of the piston, or inferior tinder, will at once render the appliance practically useless. Native made and effective fire-pistons were certainly widely distributed in the East before 1865. European travellers who observed them expressed great astonishment at this peculiar method of fire producing, which was evidently quite new to them. They were educated and experienced men, and we may gather from their marvelling at the method, that they were unacquainted with it at home, where the domestic use of the fire-piston must have long since died out. Bastian, who records in 1866 that he had seen the fire-piston in Burma, was born in 1826, and was therefore about forty years old at the time, and although his memory would have gone back so far into the early half of the last century, he was evidently unfamiliar with the instrument in Europe. It is unlikely, therefore, that the instrument was of at all *recent* introduction from Europe at that time. Another important point to be remembered is the fact that *no fire-pistons of European make* have, apparently, been found in the Eastern area of dispersal.

From the passage in the *Mechanics' Magazine* quoted above, we may gather that in 1842 the fire-piston was but little known in England, though it is said to have been familiar on the Continent. It appears on the whole unlikely that this instrument can have been taken out as a trade article to the East by English travellers later than say 1830, since its practical use, never very prevalent in England, seems to have been quite on the wane by that time. Nor is it likely that it would have been traded abroad much earlier than, say, 1815, since its first introduction to domestic use in England was no earlier than 1807. This would allow a probable maximum period of fifteen years during which English traders and travellers could introduce it to various parts of the East. The predominant European influences in those regions which are comprised within

the area of dispersal of the fire-piston in the East, have been the English and the Dutch. Of the use made of the instrument by the Dutch, I have no record, but at least it would appear that they were not very vigorous in pushing this article in the Malay Archipelago, since such large possessions as Dutch Borneo, Celebes, and the Moluccas, do not appear to have received the instrument. As to the French, who appear to have entertained a kindly feeling towards the fire-piston and to have made fairly considerable use of it, they need hardly be considered as possible introducers, since the regions of geographical distribution of the fire-piston in the East are mainly outside the sphere of their direct influence.

It is certainly difficult to account for the wide Eastern distribution of the fire-piston and the development of local native varieties by the theory of introduction from Europe, which allows so short a time in which to develop the conditions which already obtained prior to 1865. This is especially the case when we remember that such primitive and widely separated peoples as the Moïs of Indo-China and the Indonesian peoples of Luzon in the Philippines are well acquainted with the manufacture and use of the instrument. These peoples have until recently been very little known to Europeans.

It may be suggested that Europeans may have introduced the fire-piston into some one or two districts only, and that the further dispersal was effected by transmission elsewhere through native agency. This would, however, have required a longer time than is available, as dispersal by this means is necessarily slow.

It has frequently been suggested that the Chinese must have originated and organized the dispersal of the fire-piston in the East. It is a common practice to credit the Chinese with the invention of many strange things, but there is, unfortunately, no evidence whatever that they even knew of the fire-piston, except perhaps on the Burmese and Siamese frontiers. At least, as far as I know, there are no records or specimens which give evidence of such knowledge on their part.

The geographical distribution of the fire-piston in the Siamese Malay States and the Malayan regions of the Peninsula has caused some of the distinguished local experts to believe that the instrument is rather Siamese than Malayan in origin, as far as that region is concerned. This theory would perhaps account for its north-easterly and north-westerly dispersal amongst the Moïs, the Shans,

and the Kachins. It is possible that the Malays may have borrowed it from the Siamese. Be this as it may, the Malays have certainly acted, perhaps not as the sole, but at any rate as the main, dispersers of the fire-piston over the islands of the East Indian Archipelago, from Sumatra to the Philippines. Wherever in this region the fire-piston is found—even though it be in the hands of and manufactured by more primitive peoples—the influence of Malayan culture is also observable, and the instrument is not found in districts which are remote from Malayan contact. It is even possible that the Malays are the actual originators and that the Siamese may have borrowed the idea from them. Or the evidence of its frequent use amongst the widely separated 'Indonesian' or Proto-Malay tribes of Luzon and the Moïs of Indo-China, who are by some ethnologists classed as belonging to the 'Indonesian' stock, together with the fact that the neighbouring more highly cultured peoples are without it, may be taken as pointing to a Proto-Malayan origin, which would assign the invention of the fire-piston to a race still lower in culture than the Malays proper. This theory would involve a very considerable antiquity for the Eastern fire-piston and the probabilities are perhaps hardly in favour of it. All that can be said with any certainty is that, whether the fire-piston was introduced to the Malays by Europeans or by some other Eastern people in a condition of culture more or less on a par with their own, we must, I think, give to the Malays due credit for having materially assisted in extending the geographical range of the instrument and of having introduced it into several of the islands of the Eastern Archipelago where it has taken root, and where local varieties have in the course of time arisen and themselves again become modified in matters of detail.

With the single exception of the peculiar type from British North Borneo (fig. 37) all the Eastern forms are essentially the same in general structure, the less important details being those which alone are capable of modification and variation. Such are the materials used in the manufacture of the cylinder and piston which may be of bamboo, wood, horn, ivory, bone, brass, or lead (lead and tin usually); the external form; such accessories as the tinder receptacle which may be separate from the instrument, and consist of bamboo, nut-shells, beans, palm-spathe, or of woven materials. Prickers for adjusting the tinder, grease-boxes and spatulae for applying the grease to the piston-packing, are other accessories which may be present or absent, but whose occurrence in identical

shape in widely separated regions adds to the evidence which goes to prove that the whole series of Eastern types belongs to one morphological group.

Assuming, for purposes of argument, that the Oriental fire-piston was invented independently by the relatively primitive peoples amongst whom it appears to have been in use during a long period, we may consider the question as to the manner in which these people might conceivably have hit upon this highly specialized method of producing fire. It must be admitted that the great difficulty in arriving at a satisfactory conclusion upon this point is the principal factor which militates against the acceptance of the theory of the native origin of the fire-piston. There can be little doubt that, if the invention *was* made by an Eastern people, the principle must have been arrived at by some happy accident, the effect having been produced during the process of some action or work unconnected with fire-making. It is inconceivable that such a physical phenomenon could have been thought out and elaborated scientifically by primitive peoples, and we may remember that in Europe the first appreciation of this phenomenon of heat-production by air-compression was due not to research but to observation of an unexpected effect. There are three absolute essentials necessary for production of heat in this manner: (1) a cylinder with *accurate* bore, closed at one end; (2) a piston *accurately* fitting the cylinder; (3) tinder which is very quickly inflammable. Therefore, in our search for prototypes we are necessarily restricted to objects in which these elements may conceivably be associated.

A form of bellows used in blowing up the fire, which is very prevalent in Burma and many parts of the mainland and the Eastern Archipelago, and which belongs largely to Malayan culture, is constructed upon the principle of a piston; there is a cylinder and a packed piston, whose thrust drives the air out in a forcible manner. In this, however, a duct opens from the lower end, and since, therefore, the cylinder is not a closed one, there can be but little *compression* of the air; certainly not sufficient to cause a marked rise in the temperature. So that even if by accident some tinder-like material adhered to the piston, it could not be ignited. In breaking through the nodes of a bamboo, in order to render the bore continuous and of greater holding capacity, a rod may be thrust violently down the cylinder which at first is, of course, closed. Certain simple and primitive-looking fire-pistons amongst the Kachins are indeed

made of natural bamboo cylinders. It is unlikely, however, that the rod would fit so tightly as to act like a *packed* piston, and hence there would be next to no air-compression. Appliances of the nature of toy pop-guns and water syringes are not unknown in the East, but although these exhibit some structural resemblance to the fire-piston, there seems little likelihood of their having suggested the latter. The process of boring and gauging blow-guns when these are made of solid wood might, conceivably, have led to some unintentional compression of the air within the bore, which might have caused the ignition of some responsive material adhering to the boring- or gauging-rod. While even this is improbable, it is interesting to recall that the distribution of the Oriental blow-gun embraces many of the regions where the fire-piston is found. I have frequently had it suggested to me, that it is obvious that the fire-piston must have been derived from the pestle-and-mortar so commonly used throughout the Indo-Chinese and Malayan area for crushing the betel-nut or *chavica* leaves. In favour of this, it may with truth be urged, that there is often a very strong resemblance between the two appliances; indeed some of the small pestle-and-mortar apparatus in the British Museum bear so striking a resemblance to some of the Bornean fire-pistons, e.g. the type shown in fig. 35, that it is necessary to look carefully at the specimens, in order to see to which group they belong. On the other hand, it is evident that the suggestion that the pestle-and-mortar is the prototype of the Eastern fire-piston is based solely upon this superficial similarity, which is evidently appreciated by the Malays, since they apply the word *gobek* to both instruments. We have only to remember that for all practical purposes, characteristics which are essential to the efficiency of the one instrument are absolutely detrimental to that of the other. In the case of the *betel*-mortar, it is imperative that the pestle should work *loosely* in the mortar, and it is equally essential that in the fire-apparatus the piston should *very accurately fit* the bore. A slight departure from this rule in either case renders the instrument useless for its purpose, and it is, consequently, most improbable that either could have accidentally performed the function of the other and so have suggested it.

One other appliance seems to have a claim to consideration. In the process of cleaning the barrels of the small muzzle-loading cannons, such as are frequently seen in the East Indies, it is conceivable that in driving an accurately fitting cleaning-rod up the bore

with some force a considerable compression of the air inside might result, and that a piece of readily combustible matter might have been ignited thereby. The touch-hole, being very small, might not have caused a too great diminution of the air-pressure, since the air could only escape relatively slowly through this orifice; or on some occasions the touch-hole may have been temporarily blocked, in which case the compression would have been greater and more effective.

In some respects this appears to be the least unlikely of the possible suggestions as to the prototype of the fire-piston, and colour is lent to the idea by the form of the North Borneo fire-piston (fig. 37), in which the cylinder has the appearance of a miniature cannon actually *fitted with a 'touch-hole'*.

At the best, however, I am not at present able to offer any very convincing suggestions as to how the fire-piston may possibly have been discovered in its Eastern home, and it seems all too likely that the question of its *monogenesis* or *polygenesis* may never be completely determined. The problem remains an exceedingly interesting one, both from technological and ethnological standpoints, and, in concluding this attempt to bring together the material available for comparative study, I may express the hope that further information may be forthcoming, both as regards the *earliest* records of the fire-piston in the East, and as regards the geographical distribution and varieties of this peculiar method of producing fire.

I wish to thank heartily those who have so kindly assisted me to procure specimens or information. More especially am I indebted to Messrs. Skeat, Annandale, Shelford, Leveson, Miller Christy, Joyce, and Bidwell, whose assistance has been of much value to me.

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Fig. 2. Fire-piston, from E. J. Mitchell, June 19, 1832, in *The Mechanics' Magazine*, xvii, 1832, p. 328.

Fig. 3. Fire-piston, France. From *The Penny Magazine*, July 26, 1834, p. 268.

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Fig. 5. Ditto, England; cylinder of rolled brass, 10·2 cm. long; piston of steel, 9·5 cm., with brass mounts and leather packing. E. Bidwell collection.

Fig. 6. Ditto, England ; cylinder of cast brass, 8·1 cm. long ; piston of steel, 8·6 cm., with brass mounts ; the packing is of brass. E. Bidwell collection.

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Fig. 9. Ditto, same *data* ; cylinder of bamboo, 8 cm. ; piston of wood, 13·1 cm.

Fig. 10. Ditto, same *data* ; cylinder of bamboo, 8·5 cm. ; piston of wood, 11·5 cm., carved head.

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Fig. 33. Fire-piston, Sumatra; copied from R. T. Pritchett, 'Smokiana,' p. 97.

Fig. 34. Fire-piston, Fort van der Capelle, North Padang, Sumatra; carved cylinder of dark horn, 8·2 cm.; piston of horn, carved, and with knob hollowed out for tinder and fitted with lid which, with a half-turn, can be secured by a projection which passes through a notch (fig. 34 *a*). Collected by Mr. Carl Bock; British Museum.

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Fig. 37. Fire-piston, west coast of British North Borneo ; of very unusual construction ; cylinder of lead (or lead and tin), cast in bamboo mould, with lateral notch on one side at lower end, from which a duct leads to the bottom of the bore in the cylinder ; length of cylinder, 10·3 cm. ; piston of wood, 13·5 cm., capped with lead at the lower extremity. Collected by Mr. P. Beaufort, 1890 ; given by Sir R. Biddulph Martin, Bart., to the author, 1907.

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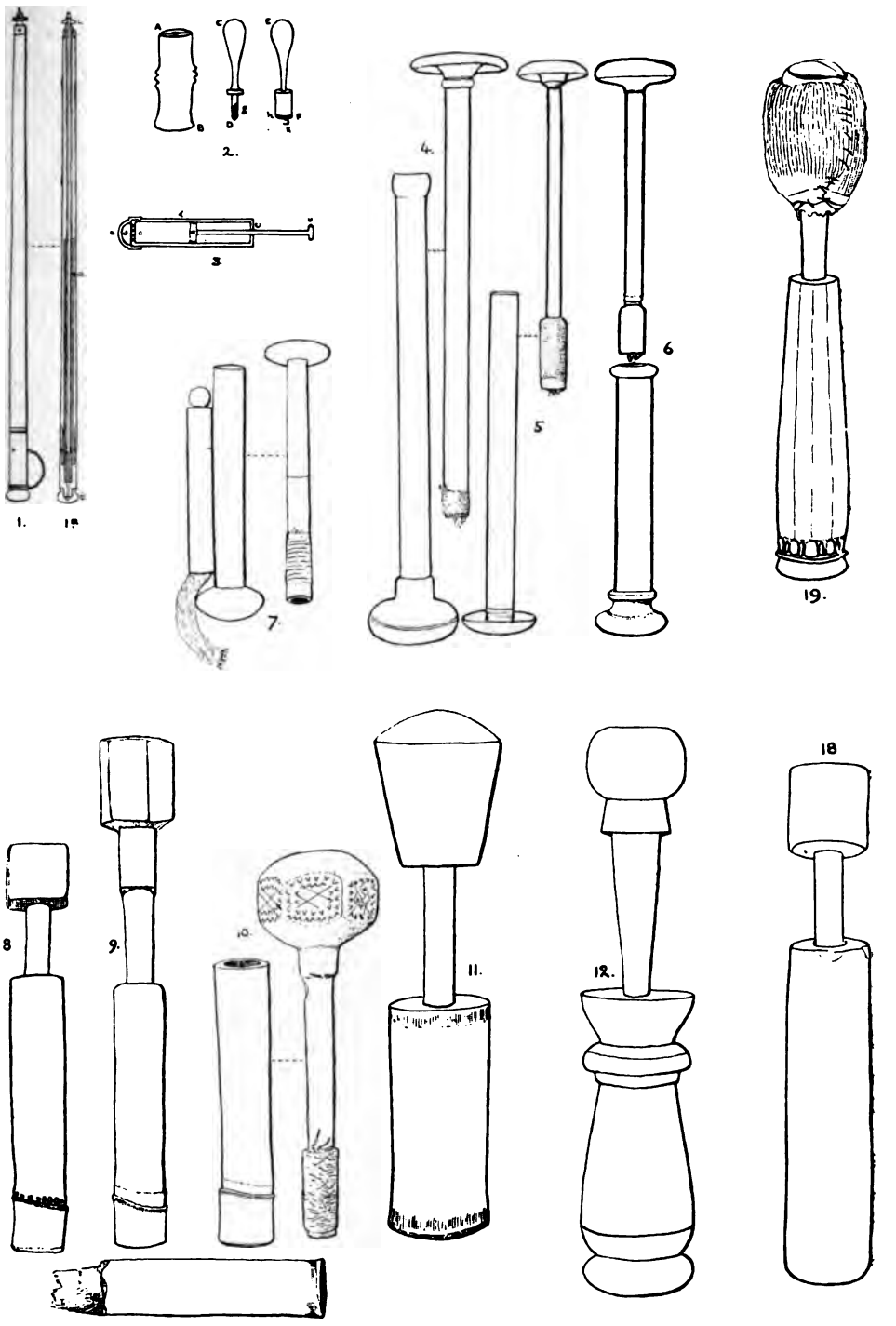
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Fig. 46. Fire-piston, Calinga tribe, Nueva Viscaya, North Luzon ; faceted cylinder of horn, *c.* 6·3 cm. ; piston of wood. Ethnological Museum, Rome (49164) ; from a rough sketch.

Fig. 47. Fire-piston, Luzon, Philippine Islands ; cylinder of black horn, 7·5 c.m. ; piston of wood. E. Bidwell collection.



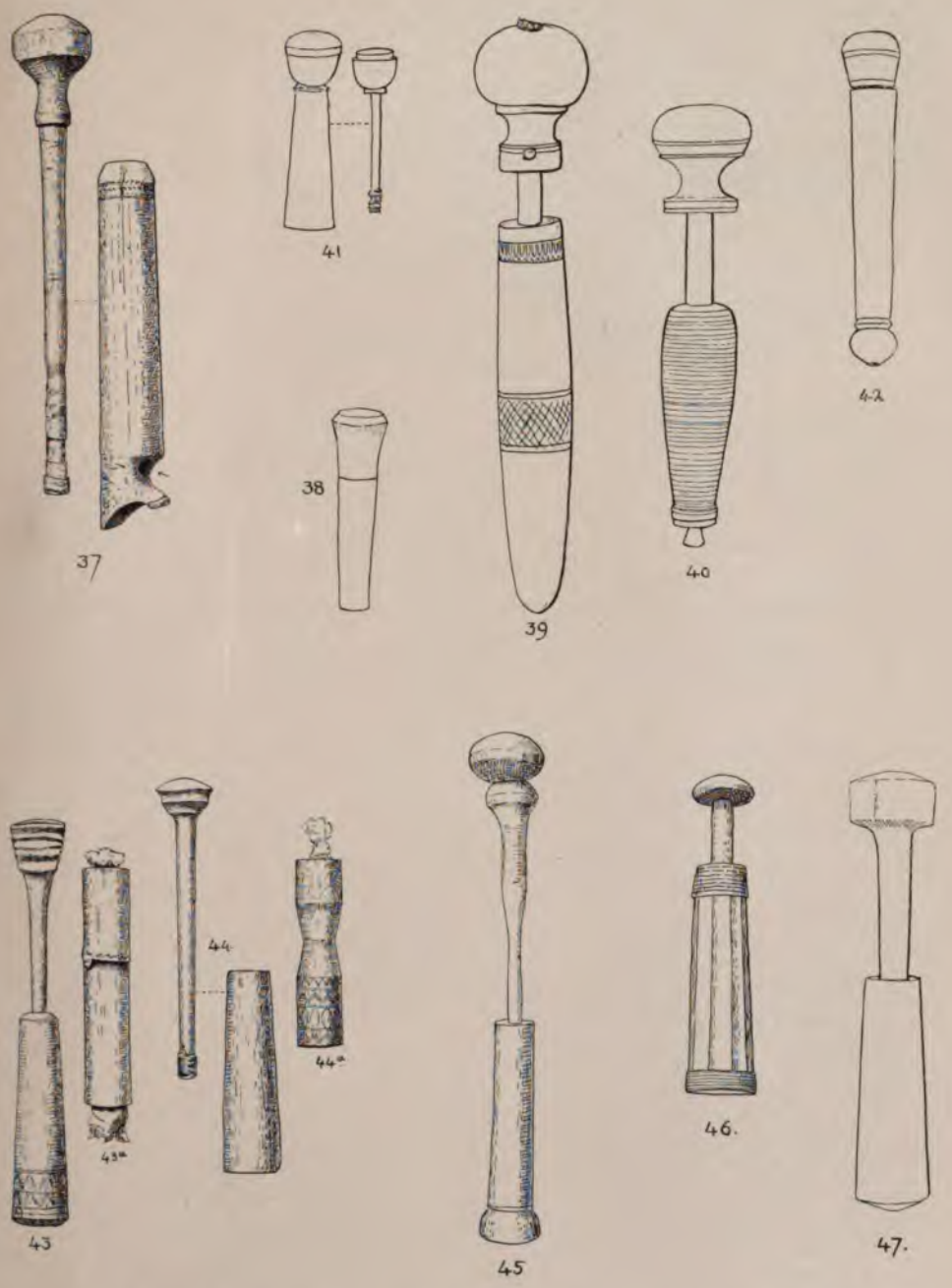
Fire-piston: 1-6, Europe; 7-12. 18, 19, Further India.



Fire-piston : 13-17, 21-24 *a*, Further India.



Fire-piston : 25–30, Further India ; 31–34, Sumatra ; 35, 36, Sarawak.



Fire-piston: 37, 38, Borneo; 39–41, Java; 42, Flores; 43–47, Philippines.

EXOGAMY AND THE MATING OF COUSINS

By A. E. CRAWLEY, M.A., F.R.A.I.

Author of 'The Mystic Rose, A Study of Primitive Marriage', and 'The Tree of Life, A Study of Religion', etc.

The problem of the origin of Exogamy has been narrowed down within the last few years. In the first place, it is now indisputable that Exogamy is a phase of a tendency, constant in all stages of culture, towards *out-breeding*—an unfortunate term this, as the crucial question is psychological, and pre-scientific ideas of 'instinct' or 'Nature's promptings' must not be allowed re-entrance under the aegis of a eugenic philosophy. In the second place, we have fixed upon the practical starting-point of this tendency, in the *prohibition against the mating of brother and sister.*

We must first note that such a prohibition could not have originated, in the first instance, on the ground of kinship. Are we then to accept the view of Messrs. Atkinson and Lang, to the effect that (if I may quote Mr. Thomas's account) 'men originally lived in isolated groups, ruled over by an old male, exactly as a herd of cattle is ruled. This involved the exclusion of the young males, for the whole of the adult female population of the group formed the harem of the old male. Then in process of time it became possible for the young males to remain within the group, which was thus immensely strengthened for offence or defence, but only on condition that they went abroad for their wives. As time went on, this rule, imposed by the old male, crystallized into an instinct, and, the rights of the old male falling into decay at the same time, there arose the law that no one might marry within the group in which he was born'?

In this description there is too much to be assumed, and it bristles with fallacies, though it may show the true eugenic touch. The return of the prodigal sons, engineered by their mothers, is perhaps the weakest point of Mr. Atkinson's explanation of the Primal Law. Again, why should the rights of the old male fall

into decay, at a time when, *ex hypothesi*, legal instincts were on the make? The moral revolution which the primal law needed to start it is too improbable. Last, but not least, *it is a psychological impossibility for any rule, imposed by any male, old or young*, or for that matter, by any female, to *crystallize into or become*, in any way whatever, *an instinct.* It is, by the way, a possibility that pre-human men lived like cattle in 'groups', but there are more probabilities in favour of the view that man has always had a more or less monogamous fire-circle, as the unit of his social organization.

We need an explanation of the law against brother and sister-unions, which is derived from a sounder psychology.

Mr. Havelock Ellis, the soundest psychologist of the day, and himself the discoverer of many tendencies in the human mind, the understanding of which will be an inestimable boon to the race, remarks in his *Psychology of Sex*, 'The explanation of the abhorrence to incest is really exceedingly simple. Any reader who has followed the discussion of sexual selection in the present volume and is also familiar with the "Analysis of the Sexual Impulse" set forth in the previous volume of these *Studies* will quickly perceive that *the normal failure of the pairing instinct to manifest itself in the case of brothers and sisters, or of boys and girls brought up together from infancy*, is a merely negative phenomenon due to the *inevitable absence under those circumstances of the conditions which evoke the pairing impulse.* Courtship is the process by which powerful sensory stimuli proceeding from a person of the opposite sex gradually produce the physiological state of tumescence, with its psychic concomitant of love and desire, more or less necessary for mating to be effected. But between those who have been brought up together from childhood all the sensory stimuli of vision, hearing, and touch have been dulled by use, *trained to the calm level of affection, and deprived of their potency to arouse the erethistic excitement which produces sexual tumescence.* Brothers and sisters in relation to each other have at puberty already reached that state to which old married couples by the exhaustion of youthful passion and the slow usage of daily life gradually approximate. Passion between brother and sister is, indeed, by no means so rare as is sometimes supposed, and it may be very strong, but it is usually aroused by the aid of those conditions which are normally required for the appearance of passion, more especially by the unfamiliarity caused by a long separation. In reality, therefore, the usual absence of sexual attraction between brothers and sisters requires no special

explanation; it is merely due to the normal absence under these circumstances of the conditions that tend to produce sexual tumescence and the play of those sensory allurements which lead to sexual selection. It is a purely negative phenomenon, and it is quite unnecessary, even if it were legitimate, to invoke any instinct for its explanation. It is probable that the same tendency also operates among animals to some extent, tending to produce a stronger sexual attraction toward those of their species to whom they have not become habituated.' (Evidence on this point is quoted.) '*In animals, and in man also when living under primitive conditions, sexual attraction is not a constant phenomenon; it is an occasional manifestation* only called out by powerful stimulation. *It is not its absence which we need to explain; it is its presence which needs explanation*, and such an explanation we find in the analysis of the phenomena of courtship.' I have put in italics those parts of the passage which are most emphatic and throw the matter into clearest relief. In an appendix to vol. iii of his *Studies* Mr. Ellis has a valuable discussion on 'the Sexual impulse among savages', in which he proves the occasional nature and periodicity of this function. Anthropologists should not ascribe to primitive man either unbridled lust or an infinite capacity for satisfying it.

To the above solution of our problem, I subscribe, with due allowance for other psychological factors, which vary with the culture of the race, e. g. sexual taboo, the moral law, proprietary jealousy.

But the exogamous tendency became a *legal* prohibition against, in the first instance, the mating of brother and sister. This still requires explanation. Why should a natural tendency require the force of law to corroborate and justify it? I think there is a simple explanation. In many departments of primitive life we find a naïve desire to, as it were, assist Nature, to affirm what is normal, and later to confirm it by the categorical imperative of custom and law. This tendency still flourishes in our civilized communities, and, as the worship of the normal, is often a deadly foe to the abnormal and eccentric, and too often paralyses originality. Laws, thus made and with this object, have some justification, and their existence may be due, in some small measure, to the fact that abnormality increases *pari passu* with culture. But it is a grave error to ascribe a prevalence of incest to the period preceding the law against it. A close analogy may be seen in the primitive attitude towards property, and

in matters of respect and etiquette. Other examples I have given in my books, *The Tree of Life* and *The Mystic Rose*.

The prohibition next forbids the mating of 'tribal' brothers and sisters. This familiar point needs no explanation here. It is due to 'tribal' solidarity and is engineered by identity of names. Totemism has no importance whatever for exogamy except in so far as it is a system of names denoting 'kinship'. The totem is, from beginning to end, a surname *sans phrase*. If it is worshipped, well, so is the surname of many a civilized noble house.

The second intention of this paper is concerned with the mating of cousins. Here, as before, I will try to avoid circumference interests and to aim at a centre.

A fact ignored by the discoverer of 'exogamy' is this, that, while it forbids the union of brother and sister, some cousins and so on, it is actually *in-breeding* of a close kind. All the facts tend to show that primitive man relied for his wives on friendly arrangements as a rule. From his point of view, the ideal state of things would be that every tribe should be dual, so that wives could be obtained without friction or difficulty. And this is precisely what we find in many uncivilized peoples. The tribe is divided into two 'exogamous' sections, or phratries; marriage outside the tribe is forbidden, and also within the phratry, but is commanded between the two phratries. The mechanical operation of 'descent', paternal or maternal, on the names, totemic or otherwise, makes the units of a phratry 'brothers' and 'sisters'. This interesting arrangement is now well known.[1] How is its origin to be explained? A deliberate bisection, as Mr. Lang has proved, is unthinkable.

No tribe was ever deliberately divided; the bisection must have grown out of some simpler bisection. What was this? Mr. Lang supposes two of his kine-like hordes, headed by the old males, forming an alliance for matrimonial purposes.

This is correct, no doubt, but requires modification if the nature of the primitive group was not as described by Mr. Lang.

[1] In New Britain they are called after the two powers of Good and Evil, *To Kabinana* and *To Kovuvuru*. As descriptive terms for them we have *Veve* in Melanesia, which means *division*, and appears to have obtained the further connotation of 'motherhood'; among the Karens they have no names, but are described as *Pah-tee* ('of descent from the father's side') and *Mo-tee* ('of descent from the mother's side'). In Fiji members of the two sides of the house in each family are described as 'marriageable', concubitants. There is nothing totemic here.

My view then of the two phratries is, that, *as we find them, they are two great families,* in the second and wider sense of the term, and that *they sprang from two families* in the narrower sense. In other words they are the '*sides of the house*' *in one great dual family.* These two original families intermarried, this is the first step, and continued to intermarry generation after generation. Each was originally exogamous, and of course remains so because the members of each bear the same name, and are therefore 'akin', whether really so or theoretically matters not to the savage, but as a fact they will be so related. The two phratries thus come *first.*

The phratry-names (*pace* Mr. Lang) are usually unintelligible, and therefore probably older than the names of the smaller families or totem-kins which compose the phratries. This is one indication that the two phratries are themselves also earlier.

Secondly, the *totemic small families which make up each phratry are younger branches of the original dual family which have come in through marriage of women taken from other groups* and giving their names to their children. Such a family name would naturally be *nearer,* as it were, to those who bore it than the name of the greater family of which they form a younger branch. Mr. Howitt has observed that the totems are living names, part of the living language, and invariably derived from natural objects found in the tribal country; the phratry-name is general, 'the totem-name is in one sense individual, for it is certainly nearer to the individual than the name of his moiety.'

The two phratries are thus developed by a natural growth, and are not due to a deliberate bisection of an existing community. They are implicit in the first marriage, which is the nucleus of the future community. The totem-kins are not subdivisions, but younger branches of the old families. Families of the one great family cannot intermarry because they belong to that family, and they marry into the other great family because it is 'the other side'.

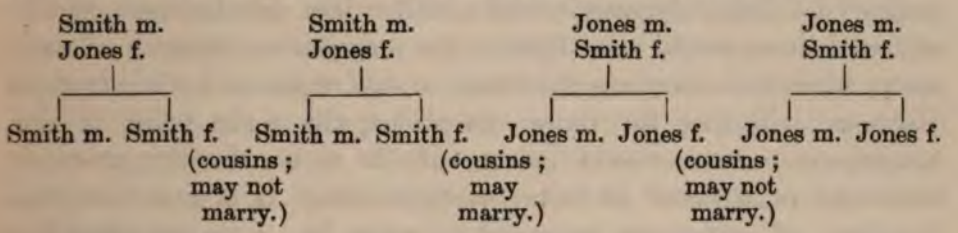
It may be asked, why *two* families? Well, *two families are needed in every marriage,* the family of the husband and the family of the wife. Why should they continue to intermarry? Why not? Wives are not easy to come by in early society except from friends, and the pressure of external circumstances will set a premium on such combination. But will not the two families very

soon become too nearly 'related'? They will become 'related', but not too nearly, for the children who marry in every generation will have different names, the one being that of the female side of the dual family, and the other that of the male. The intermarriage of the two phratries is often obscured in the minds of investigators by the prohibition to marry in the same phratry, but in the native view it is just as important. Lastly, it is only *cousins* who can marry, and as the earliest peoples have no term for cousin, it is probable that this relationship was not originally regarded as being more than a *friendly relation.*

I suppose two friendly fire-circles, consisting each of father, mother, and one or more children. It does not matter whether the two are related or not. They will naturally exchange daughters in marriage to their sons. This is the most usual method of obtaining wives in Australia, and is I think the most primitive. Thus we get two or more new fire-circles in the close neighbourhood of the old, the friendly relation will be emphasized by all the circumstances of a nomadic life, and the two connected families will keep together. I presume an exogamous tendency, already explained, towards marrying outside of the fire-circle, combined with a preference to marry those of the same age. The next generation will, so far as the balance of the sexes allows, marry in the same way, this time cousins. They do not recognize any real relationship in this as yet, as the earliest savages do not; what is always known, at least by modern savages, is the relationship of parent and child, brother and sister. These people then may be supposed to know who belongs to the two families. At any rate as soon as names are applied there will be no difficulty in distinguishing them. The system works both with male and female descent, with either totemic or numerical, local or descriptive names, nicknames or complimentary appellatives. With female descent the two names will be dotted here and there; with male descent the holders of one name will tend to be grouped together. The latter state of things may end in local exogamy. There is an important principle probably universal in early times, that *a wife does not take the name of, or become kin to, her husband. This creates a perpetual potentiality of marriage between her side of the house and her husband's,* and doubtless had much to do with delaying the recognition of relationship between those cousins who have different names. The two families will in the second generation

see themselves *reproduced*, and also in the third and following, by the two sets of intermarrying cousins.

With regard to cousins and their mating let us note, first, that it has been proved that this union is by no means deleterious to the offspring. Cousin-marriage is a well-known mark of dual exogamy, but it occurs in a form which may seem strange, if one does not make a diagram. The peculiarity is that while the children of two brothers may not marry, nor the children of two sisters, *the children of a brother and a sister may. This is an automatic result of the fact that the name of the family is inherited*; it makes no difference whether male or female descent is used.



The children of the brother and sister Smith may marry because by their *names* they belong to opposite phratries.

This peculiarity was first noted by Dr. Tylor, who called it cross-cousin-marriage. All peoples who allow cross-cousin-marriage thereby show that they recognize the two sides of the house, and have the germ of the phratry system. Cousin-marriage generally is the most favourite connexion among early peoples. Mr. Fison says that 'in some parts of Ireland, at the present day, a girl will sometimes reveal the state of her affections to the youth on whom she has set her heart, by saying, "I wish I were your cousin." And this is understood to be an offer of marriage.' It is what may be called the 'endogamous' tendency, and the cousin-marriage termed *cross* is a key to the phratry system. In the two-phratry system of the Iroquois, each phratry is called a 'brotherhood'; the families of phratry *A* are '*brother*'*-families* to each other, and '*cousin*'*-families* to those of phratry *B* and vice versa, a case which, so far, proves the whole business.

But how is this dual family, the nucleus of a possible tribe, to grow? It does not seem to have ever been pointed out that cousin-marriage, and all such 'endogamy', tend to check the increase of numbers within a tribe. Two pairs of cousins marry, making two new fire-circles, and have, say, two children apiece. These

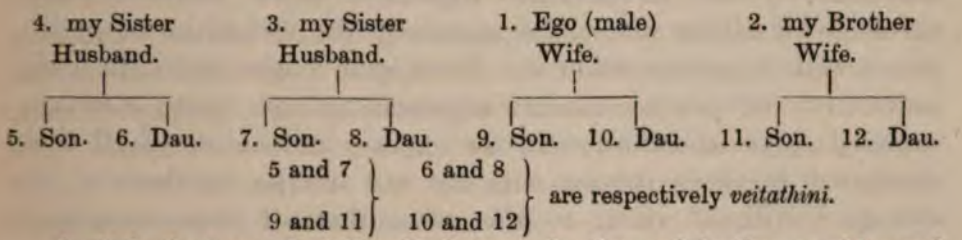
also marry. The result is two family-circles and perhaps four children, who may in their turn marry. If cousins had been forbidden to marry, we should have had eight fire-circles and perhaps sixteen children. Exogamy thus in the wider sense, but not McLennan's, has an important bearing on the making of nations. In such a dual family as we are assuming, it will soon happen that the supply of cousins fails, the balance of the sexes will be unequal; young men will therefore have to get their wives from elsewhere, or young men from elsewhere may be allowed to join the group. It is not likely that this latter method of getting rid of superfluous women would be adopted at an early stage, polygamy would be preferred. But polygamy seems a rather late development, and in any case there would be a limit to the polygamous capacity of early man; male individualism, moreover, would object to male intruders. However, allowing for these exceptions, the main point is that sometimes a man would get a wife from a friendly group, by exchange of a sister or other arrangement. It is just here that 'capture' of wives was supposed to come in. I do not deny that such capture may occasionally have occurred, but I hope I have elsewhere shown that the hypothesis of a period in human history in which 'marriage by capture' was an institution has no foundation. It is of the rarest occurrence in Australia, for such acts lead to war, and early man is not fond of such disturbances. He is perforce as peaceable and harmless as may be; in this Mr. Payne agrees. The capture of women in time of war is a very different thing.

It is this introduction of fresh women that brings new blood into the family, and causes it to expand by producing new branches of the two original families, in time raising the dual family to the proportions of a tribe.

My suggestion as to the origin of dual exogamy is confirmed by the following. Dr. Codrington says of the Melanesians, 'in the native view of mankind, almost everywhere in the islands, nothing seems more fundamental than the division of the people into two or more classes, which are exogamous, and in which descent is counted through the mother. . . . No single family of natives can fail to consist of members of more than one division.' The same two divisions run through the Banks' Islands, with the Torres Islands and the Northern New Hebrides. In neither the Banks' nor the New Hebrides is there a name to distinguish the division or kindred; nor is there any badge or emblem belonging to either;

'*in their small communities every neighbour is well known.* Each of the divisions is in Mota called a *veve*, in Motlav *vev*, a word which in itself signifies "division". Those who are of one *veve* are said to be *tavala ima* to the others, i. e. "of the other side of the house." A woman who marries does not come over to her husband's side of the house; she is said to be *ape mateima*, "at the door." All of the same side of the house are *sogoi* to one another. Hence a man's children are not his *sogoi*, "his kindred," his nearest relatives are his sister's children. Within the two *veve* there are certain families among the Banks' Islands people.' In Aurora, and Maewo of the New Hebrides, the members of the two divisions speak of one another as 'of the other side', *ta tavuluna*. Several families are found within the kin; most are named from places, one from the octopus, but these have no notion of descent from it, and eat it freely. To these family groups the same name *veve* is given as to the two great kindreds. In Lepers' Island the two divisions are called 'bunches of fruit', *Wai vung*, as if all the members hung on the same stalk.

The Fijian classificatory system is as follows :—



(*tathi* is the term of relationship between brother and brother or sister and sister.)

5 and 7 are *veinganeni* with 6 and 8.
9 and 11 „ „ „ 10 and 12.

(*ngane* is the term of relationship between brother and sister. It means 'one who shuns', and the *veinganeni* are the non-marriageable persons.)

5 and 7 are *veindavolani* with 10 and 12.
9 and 11 „ „ „ 6 and 8.

(*veindavolani* are the only marriageable persons and are expected to marry. *Davola* means *marriageable.*)

Here the germ of two phratries is evidently the cross-cousin-marriage. (It is to be noted that there is evidently an etymological connexion between the words *tavala* of the Banks' Islands, *tavuluna* of the New Hebrides, and the Fijian *davola.*) The *veindavolani* are 'of the other side of the house' and are marriageable. Apply family

names to these and we have two phratries, continually repeated by cross-cousin-marriage.

We have mentioned that the families of one phratry of the Iroquois are 'cousin-families' to those of the other. The Karens of South Burmah, says Mason, 'have two principal divisions, the *Sgaus* and *Pwos*, which are indicated as *Pah-tee* ("of descent from the father's side") and *Mo-tee* ("of descent from the mother's side").'

The Chinese have one set of terms for the ancestors on the father's side, and another for those on the mother's. The Zulus mark the distinction in the same way for the first set of ascendants.

I think this theory of the origin of the two-phratry system, may claim the advantages that (1) it explains the bisection as a natural growth without calling in the aid of any arbitrary and deliberate legislation. Here I am at one with Mr. Lang. It gives a method by which the division could arise automatically; (2) it explains (and these are difficulties in other explanations) why the families of one phratry may not marry among themselves; (3) it does not begin with local exogamy; (4) it enables us to do without the self-contradictory and unwarranted hypothesis of an 'undivided commune' with all its difficulties, especially the difficulties of getting into it and of getting out of it. Here again I agree with Mr. Lang. Later on it will produce another argument against 'group-marriage' so-called; (5) it coincides with the express statements of all those aboriginal thinkers (whose wits are not inferior to those of the average 'civilized' man), to the effect that all these exogamous groupings are connected with kinship, real kinship, though conveniently, as with us to some extent, identified with name-kinship; (6) it excludes from an unwarranted pre-eminence the system of totemism; (7) it is of universal application. It explains those rare cases where the phratries are more than two; those where they exist, but have no names, mere 'sides of the house', and those in which various names, sometimes fanciful, have been applied later. It shows that the germ of dual exogamy is contained in every marriage and therefore in every family; those peoples who have not developed this, have to thank better circumstances, less external pressure, than fell to the lot of people like the

tralians; (8) and lastly, it enables us to trace the origin and th of the tribe, in a natural and convincing way, from the ly. Mr. M'Gee, of the Bureau of Ethnology, states, as the

accepted result of American research, that some small discrete group, probably the family, was the earliest unit. Mr. E. J. Payne, in his *History of the New World*, is of opinion that the tribe can originate from the family. Indeed, what else is it to originate from? It would seem that some few peoples thus retain, not as a mere survival, but as a living institution, the actual machinery by which the process was carried out. I may here note that Mr. Lang's original *local group*, consisting of several family-names, seems too large not only for Mr. M'Gee's 'small discrete bodies, probably family-groups', but for the patriarchal jealousy of the polygamous ape of Mr. Atkinson. I should like to add, as bearing on connected issues, that Mr. M'Gee is of opinion that these families 'must have been essentially, and were perhaps strictly, monogamous', and that he scouts the postulates that the primitive Americans were arrayed in 'chaotic hordes, and that organized society was developed out of this by the segregation of groups' (as Mr. Howitt seems to hold), and 'that the primal conjugal condition was one of promiscuity'. If we need an analogy from some higher animal for the primitive state of man, connubial and social, we really cannot bring forward the *baboon*.

I would therefore place the order of development thus: the family, combination of two families (resulting sometimes, owing to external pressure, in a tribe with dual exogamy), or of more than two; then further combination; tribal *status* can be assumed at any time, war would organize the related families. Gentes, gotras, clans, thums, septs, and phratries are all practically identical, they are *families* with *family names*.

I noted in *The Mystic Rose* that the Arunta system resulted in the prevention of marriage between first cousins. Among the Karens first cousins may marry but are thought too near; the most suitable match is that of second cousins; third cousins are thought too remote, and beyond this relationship marriage is forbidden. Thus with the Northern *Arunta*, the original 'age-class' system has ended by preventing what no other classificatory exogamy can of itself prevent, the marriage of first cousins.

The difference of name, combined with the intermarriage of the two families, makes all *A*'s and *B*'s of the same generation marriageable; hence they are conveniently termed 'husbands' and 'wives'. In the Ta-ta-thi tribes with two phratries, every *Mukwara* man speaks of every *Kilpara* woman as 'wife' and vice versa. The

members of the younger generation in a tribe are thus always 'brothers and sisters' or 'husbands and wives'. Now without exception, so far as I know, it is the case that the real relationship is known, as Mr. Howitt says of the Kurnai, 'every one seemed to be the father, mother, son, daughter, brother and sister of every one else, but when special inquiry was made, the "tribal" relationship was distinguished from the "own" by more precise statement, as "the other father", "other mother," &c.' So Dr. Codrington says of the Melanesians that all of the grade above the 'brothers and sisters' are 'fathers and mothers', but they distinguish 'own fathers' and 'own mothers'. The same is the case with the Fijians who have no phratry names, but terms of relationship, *veinganeni* for the 'brothers and sisters', *veindavolani* for cousins. As to the relationship of 'husband' and 'wife', Dr. Codrington says 'to a Melanesian man all women of his own generation are either "sisters" or "wives", to the Melanesian woman all men are either "brothers" or "husbands". It must not be understood that a Melanesian regards all women who are not of his division *as in fact his wives*, or conceives himself to have rights which he may exercise in regard to those of them who are unmarried.'

The existence of the *two sides of the house* is thus the key to *classificatory relationship*. There are one or two other results. This explanation enables us to account for these 'tribal' or 'group-relationships' such as 'brother and sister', 'husband' and 'wife', 'father' and 'mother', without calling in the aid of 'group-marriage' or promiscuity. Hr. Cunow has made on this foundation an unanswerable argument against the 'promiscuity' theory. We note also that this system, while extending terms like 'brother' and 'father' beyond their natural meaning, ignores the relationship between the two sides of the house. It is assisted in this by the difference of family-name, and by the principle that man and wife do not become akin by marriage.

From what has gone before, it is evident that the members of a typical exogamous tribe *are all closely related*; how far they themselves recognize the fact does not matter; but the fact has an interesting bearing on the formation and persistence of racial type and character. Morgan noted this, but his explanation of the close kinship was wrong.

Preservation of type, reversion to type, variation from type, are

among the most interesting of biological phenomena. The possibility that cousin-marriage has acted for long ages as a counteracting influence against variation opens out the way to curious reflections. The variational tendency, on the one hand, is connected, biologically, with out-breeding, and psychologically with romance; herein is progress. Nature, so careful of the type, is assisted by the conservatism of man, his solidarity even, to keep the balance. Perhaps the race owes more to family-alliances than it wots of.

THE AUSTRALIAN FOREHEAD

By D. J. CUNNINGHAM, M.D., D.Sc., LL.D., D.C.L., F.R.S.,
Professor of Anatomy, University of Edinburgh.

When a large series of Australian crania is examined we are presented with an assortment of diverse characters of a somewhat extreme kind. Huxley, in his classical essay upon human fossils (1), alludes to the differences that are met with in respect to cranial height. 'Many Australian skulls,' he says, 'have a considerable height, quite equal to that of the average of any other race, but there are others in which the cranial roof becomes remarkedly depressed.' Still more obvious are the differences which may be noted in the region of the forehead, because these are more easily appreciated by the eye and only require the application of the more refined craniometrical methods when we seek to establish the precise degrees of difference in this respect.

The forehead may be defined as that region of the cranium which lies above the nasion and orbits and below the coronal suture. On either side it is bounded by the fore part of the temporal ridge. Its limits are thus very definite. It consists of two parts, a lower glabellar and supraorbital part, the region of the eyebrows, and an upper cerebral portion. I purpose excluding the former from the scope of this paper; not because it fails in interest—indeed it is the more interesting of the two districts, and presents more marked differences within the limits of this race than perhaps can be observed in any other race—but simply because the region is so important that it requires separate and special treatment, and this I hope to give to it in a future paper.

As a rule the cerebral part of the forehead in the Australian is not flat and receding, and in many cases it presents a curvature as bold and pronounced as that which characterizes the European. But in all large collections of Australian crania specimens will be found which present a degree of frontal flattening which is met with only in higher races in rare cases and then chiefly in microcephalic or deformed crania.

In the ethnological section of the Museum of the University of Edinburgh, which contains, through the influence of Sir William Turner, and the generous donations of many graduates, of whom may be specially mentioned Dr. W. Ramsay Smith, a unique collection of Australian crania, there are many specimens from different districts of Australia which show this depressed and degraded type of forehead.

It is necessary that we should devise some method of measuring this cranial character in order that we may give to it its true and appropriate value. Schwalbe (3 and 4) has pointed out that the frontal inclination depends upon two quite distinct factors, viz. (1) the degree of elevation or depression of the frontal bone and (2) the degree of curvature exhibited by the bone; and he has adopted a procedure which he believes affords information on both of these points.

The views which he entertains regarding the evolution of the cranium of recent man out of the type presented by the palaeolithic remains of Neanderthal and Spy, have led this distinguished anatomist to attach too much importance to a supposed elevation of the frontal bone, by means of which its upper border moves upwards and forwards. The diagram which he employs to illustrate his views on this point, and which we have taken the liberty of reproducing (pl. v, fig. 1), would almost seem to indicate that he believes the change to be brought about by a process of rotation of the bone around a transverse axis drawn through the nasion.

By this movement of the frontal bone Schwalbe believes that the bregma is displaced forwards and that the whole bone becomes more vertical. To estimate the extent of the change he employs three methods:—

1. The determination of a frontal angle.
2. The determination of a so-called bregma angle.
3. The determination of the position of the bregma.

A necessary preliminary to the employment of each of these methods consists in obtaining an accurate contour tracing of the mesial longitudinal arc of the cranium. This can be done with great exactitude by Lissauer's Diagraph. Upon the tracing thus acquired Schwalbe draws a base-line from the inion to the most prominent point of the glabella.

To determine the *frontal angle* a line is drawn from the anterior end of the base-line so as to touch tangentially the most projecting

point of the curvature of the frontal bone. The angle which this forms with the glabella-inion line constitutes the angle in question.

The *bregma angle* is obtained by carrying a line from the glabellar end of the base-line to the bregma and measuring the angle which it forms with the base-line; whilst an endeavour is made to ascertain the *position of the bregma* by dropping a perpendicular from this point upon the base-line and calculating the relative nearness to or distance from the glabella of the point of intersection. Each of these three methods is more or less faulty and liable to lead us into serious error.

Two discordant factors determine the degree of acuteness of the *frontal angle*, viz. the slope of the forehead and the amount of projection exhibited by the glabella. In the Neanderthal cranium, where the glabella is enormous, the lower end of the frontal line is thrust far forward, and the angle expresses this character quite as much as, if indeed not more than, the frontal inclination. It would be useless therefore to compare the frontal angle in such a cranium with the same angle taken, say, in an Andaman Islander, where the glabella is almost inappreciable as an eminence. For the same reason we cannot employ it for the determination of the degree of frontal elevation even in a single racial group such as the Australians. Amongst the crania of this race we meet with every kind of glabella, from one almost as excessively developed as in the Neanderthal cranium to one which is not more elevated than in the ordinary European skull.

The *bregma angle* suffers from even greater disabilities, because not only is the lower end of the bregma line subject to displacements due to factors quite outside the slope of the frontal bone (i. e. variations in the glabella) but also the upper end is subject to changes in its relative position on the cranial vault quite independent of those which may arise from an elevation or depression of the frontal plate. It is not necessary, therefore, to discuss the results obtained by the Strasburg anatomist by these two angles.

But still further: the different positions of the bregma in different skulls ascertained by dropping a perpendicular from that point on to the base-line does not necessarily indicate a growth movement of the frontal bone leading to an elevation or depression of the bone. In the phylogenetic evolution of the forehead of recent man there has been, as every one must see, a general tendency towards the expansion and extension of the frontal district, and

also concurrent with this an elevation of the bregma as we pass from the lower to the higher types; but it does not follow from this that the bregma has shifted its original relative position on the cranial vault to any great extent, or that what shifting there is can be accounted for by a lifting up of the posterior border of the bone.

The different positions occupied on the base-line by Schwalbe's bregma perpendicular can equally well be explained (1) by differences in the degree of development of the glabella, (2) different degrees of growth-extension of the frontal area of the cranial vault, and (3) different degrees of growth-extension of the parietal and occipital portions of the cranial wall affecting the length of the base-line and the level of its posterior end. To discuss at the present moment the interesting evolutionary increase in the length of the upper margin of the parietal bone hinted at by Huxley and so fully and clearly established by Schwalbe and the still greater extension of the squamous part of the occipital bone in recent man would open up too large a question, and could not be properly discussed within the scope of this paper, but I thoroughly realize the importance of this factor in connexion with the present contention. I have no desire to evade the difficulty (if indeed we can call it a difficulty), and it is my intention to deal with this aspect of the evolution of the human cranium at no distant date.

It is the common practice of craniologists to measure and compare the relative extents to which the frontal, parietal, and occipital elements enter into the constitution of the mesial longitudinal arc of the cranium. No one has brought out the differences met with in this respect more clearly than Sir William Turner (6, 7, and 8) in his numerous important memoirs on the craniology of different races. From these and other writings it may be seen that the relative mesial length of the frontal bone is not always the same in different races, nor indeed in different individuals of the same race. Still it should be noted that where such investigations lead one to infer a shifting backwards or forwards of the bregma the real change may be in the parietal and occipital elements of the cranial arch, whilst the frontal element may have to a large extent remained unaltered.

Still, the presumption is that there is a certain amount of variability in the position of the bregma on the cranial vault of recent man due to an increase or a diminution of the frontal district of the cranial vault, and this constitutes another disturbing element,

quite outside the question of the possible elevation or depression of the frontal bone, which tends to vitiate the results obtained by Schwalbe's bregma angle and likewise the conclusions which he draws from the position of the bregma ascertained by his bregma-perpendicular.

Schwalbe (3) fully realizes the influence which the length of the frontal bone exerts on the index which he constructs upon the position of the bregma perpendicular on the base-line. He specially refers to the high index in the New World ape, due, not to a depression of the frontal bone, but to its great length and also to the low index in the orang due to the shortness of the frontal bone.

An effort to obtain some precise and definite evidence regarding the limits of variation in the position of the bregma on the cranial vault afforded some interesting information. The method pursued was to take a similar point, which I shall call the '*third point*', on all the crania examined, and determine the position of the bregma in relation to it.

The point in question is obtained by taking the place of junction of the anterior and middle thirds of the mesial longitudinal arc measured from the nasion to the opisthion. The measurements for its determination in a large number of skulls of different races are ready to hand in Sir William Turner's numerous important memoirs. These are the figures which I have used in connexion with this part of the inquiry.

The 'third point' generally lies very close to, and often coincident with, the bregma. It is, as a rule, a few millimetres in front of, and very rarely behind, the bregma. Its mean position in five Fuegian and Patagonian skulls is one millimetre behind the bregma, and in eleven skulls of Admiralty Islanders (six males and five females) its mean position is coincident with the bregma, and in the females 1·2 mm. behind it. These are exceptional cases. In all the other races which have been studied from this point of view its average position is always in front of the bregma, although individual cases are met with in which it lies from one to five millimetres behind it.

The following table gives the results :—

TABLE I

POSITION OF THE 'THIRD POINT' WITH REFERENCE TO THE BREGMA ASCERTAINED FROM THE MEASUREMENTS GIVEN IN SIR WILLIAM TURNER'S MEMOIRS.

	Average distance in mm. *in front* of the Bregma.				Highest degree of variation.
	No.	Males	Females.	Sexes mixed.	
Bushmen	7	...	...	7·4	13 mm.
Australians	20	5·5	3·4	...	15 ,,
Sandwich Islanders	23	4·7	2	...	19 ,,
Chatham Islanders	8	7·3	3·5	...	13 ,,
Maoris	18	5·4	3·7	...	21 ,,
Veddahs	8	6·5	4	...	13 ,,
Chins	6	...	...	4·7	16 ,,
Tamil Sudras	12	8·4	4·4	...	14 ,,
Burmese	20	...	...	6·7	17 ,,
Chinese	13	...	...	4·1	14 ,,
Scottish	90	5	4·1	...	26 ,,

The mean distance of the 'third point' in *front* of the bregma in the male varies in different races between the limits of 5 mm. and 8 mm.; in the female the variation is not so great, a circumstance which may be partly accounted for by racial differences in the prominence of the glabella.

The limits of variability are seen to be considerable. Thus in the Scottish skull there is a section of the cranial arc 26 mm. long, on any point of which the bregma may be placed. The details in regard to the Scottish skulls may be given in somewhat fuller detail.

TABLE II

SCOTTISH SKULLS GROUPED ACCORDING TO POSITION OF THE 'THIRD POINT' IN RELATION TO THE BREGMA.

MALES.

		No. of skulls.
Group 1.	'Third point' 11 to 21 mm. *in front of* Bregma	6
Group 2.	'Third point' 6 to 10 mm. *in front of* Bregma	16
Group 3.	'Third point' 1 to 5 mm. *in front of* Bregma	20
Group 4.	'Third point' *coincident* with Bregma	1
Group 5.	'Third point' 1 to 5 mm. *behind* the Bregma	7
		50

FEMALES.

Group 1.	'Third point' 12 mm. *in front of* Bregma	1
Group 2.	'Third point' 6 to 10 mm. *in front of* Bregma	15
Group 3.	'Third point' 1 to 5 mm. *in front of* Bregma	18
Group 4.	'Third point' *coincident* with Bregma	3
Group 5.	'Third point' 1 to 5 mm. *behind* the Bregma	3
		40

A study of these tables brings out an interesting sexual character in the position of the bregma. In all the racial groups in which it was possible to differentiate the sexes the bregma is situated relatively further forward on the vault of the cranium than in the males. To some extent this result is no doubt due to the higher degree of development of the glabella in the male causing an increase in the frontal measurement; but I am satisfied from a study of the influence of the glabella in this direction that the whole difference cannot be accounted for in this way, and that there is a real sexual distinction to be noted in the position of the bregma upon the mesial longitudinal arc of the cranium.

The question naturally arises: Are the different positions of the bregma which we have noted associated in any way with the many forms of cranium which distinguish the racial groups in which the observation has been made? So far I have failed to determine any such correlation. The mean amount of variation as well as the limits of individual variation are very much the same in the lofty crania of the Sandwich Islanders as in the more depressed crania of the Australians. The height index would therefore seem to be in no way correlated with the position of the bregma. Nor does the cephalic index appear to be any more closely associated with it. In the brachycephalic Oahus of the Sandwich Isles the bregma is placed 4 mm. behind the 'third point'; in the dolichocephalic members of this group 4·3 mm. behind it.

Schwalbe's view that in the phylogenetic development of the human skull there has been a process of elevation of the frontal and occipital elements and that the cranium therefore opens out like the bursting of a bud is an attractive and ingenious conception. The evidence on which it is based, however, is not in every respect satisfactory.

The percentage which each of the elements of the cranial vault contributes to the mesial longitudinal arc in recent man and an ape is very instructive.

	Scotch Cranium.	Cranium of Macaque Monkey.
Frontal	33·2	43·3
Parietal	35·5	33·4
Squamous part of occipital	21·1	5·7
Nuchal part of occipital	10·2	17·6
	100·	100·

These figures show that before we can decide upon the extent

to which the lifting up of the frontal and occipital elements takes place there are many other matters which require explanation.

At the same time I am far from asserting that in recent races the form of the forehead is entirely due to growth changes which affect the curvature of the frontal bone and the extent of the area it occupies in the cranial vault. There is evidence which seems to indicate that the frontal plate as a whole may be more elevated or more depressed in certain individuals and in certain races than in others; but this plays a minor part in determining the forehead contour.

To establish this point it is necessary to discard Schwalbe's base-line and to replace it by one which extends from the inion to the nasion. The latter point is as fixed and as constant as we can expect any such point to be on a structure such as the skull in which there are so many fluctuating influences affecting its growth and form. The inion is not so satisfactory, because its position is certainly subject to a certain amount of variation. It should be noted that we employ the term inion in the sense in which it was employed by Broca, and in which it is at present used by English anatomists.

Schwalbe himself recognizes the superior advantages of the nasion-inion base-line, and it is difficult to understand why he has selected the glabella-inion line in his study of the Neanderthal cranium seeing that in it as well as in one of the two Spy crania the nasion is preserved.

We have observed that the extreme degree of variability in the position of the bregma on the cranial arc in the ninety Scottish crania examined is 26 mm. If this be measured on a contour-tracing of the mesial cranial arc so that the bregma lies exactly in the middle and two lines drawn from either end of this portion of the arc to the nasion two angles are formed with the base-line which measure respectively 53° and 62°. At least these were the results obtained in an Australian contour-tracing which I selected at random for this experiment (pl. v, fig. 2). The magnitude of these angles would obviously be affected by the height of the cranial vault; in a higher cranium they would be reduced; in a lower they would be increased; but this does not affect the result that in an average skull of the group we are dealing with the two extreme positions which may be assumed by the bregma yield a difference of only 9° in the bregma-nasion-inion angle.

But in the twenty Australian skulls taken from Sir William Turner's lists the amount of variation in the position of the bregma was only 15 mm. Now if we had two skulls of equal height which exhibited the two extremes of this degree of variability the difference of the bregma-nasion-inion angles would not be more than 5°. As we shall see later, this angle in the Australian skulls varies between the limits of 52° and 65°, which gives a range of variability of 13°.

From this it may be inferred that an elevation and depression of the frontal plate in recent man does take place to a small extent and has to be reckoned with as a factor which in some degree influences the form of the forehead.

The Bregma-Nasion-Inion or B. N. I. Angle (pl. vi, fig. 3).

In the ethnological section of the Museum of the Edinburgh University there are more than 100 skulls of Australian natives. The large amount of time which is required to obtain accurate contour-tracings of the mesial longitudinal arc of the cranium and the pressure of other duties have rendered it impossible for me to undertake the examination of the whole collection. I have therefore selected two groups, viz. thirteen skulls from Victoria and twelve from Queensland, and to these I have added three which presented a high degree of forehead flattening. These latter comprise a male skull of the Milang tribe, South Australia, specially referred to by Sir William Turner in his *Challenger* Report (p. 46), a female skull from Central Australia which exhibited syphilitic (?) disease of the calvaria, and a male skull from New South Wales.

The size of the bregma-nasion-inion or B. N. I. angle in these twenty-eight skulls is given in the following table :—

TABLE III

BREGMA-NASION-INION ANGLE, ETC., IN TWENTY-EIGHT AUSTRALIAN SKULLS.

	Victoria. Males. 8.									Victoria. Females. 5.					
Skull No.	4	1	2	9	12	5	10	13	Mean.	8	11	3	6	7	Mean.
B. N. I. Angle	64°	68°	62°	62°	59°	57°	57°	57°	60·1°	62°	62°	58°	57	56°	59°
'Third point'	−3	Co.	−4	Co.	−3	−6	−12	−10	−4·7 mm.	−7	Co.	−4	−4	−5	−4 mm.
Frontal Curve Index	21·9	21·3	22·5	21·9	24	23·2	22·2	22·5	22·4	24·3	23·7	23·6	22·7	25·4	23·9
Frontal Curve Angle	134°	136°	133°	133°	130°	131·5°	133·5°	133°	133°	130°	132°	131°	133°	126°	130·4°

	Queensland. Males.											Queensland. Females.		
Skull No.	1	2	4	6	7	8	9	10	11	12	Mean.	3	5	Mean.
B. N. I. Angle	62°	57°	60°	60°	61°	61°	61°	64°	62°	59°	60·7°	60°	60°	60°
'Third point'	−10	−5	−7	Co.	—	−9	—	−7	—	—	−6·3 mm.	−9	+2	3·5 mm.
Frontal Curve Index	22·3	20	21·3	13·2	20·8	24·7	23·4	24·5	22·8	20·8	21·4	26·5	20·2	23·3
Frontal Curve Angle	130°	136°	135°	146°	134°	128°	127·5°	128°	—	—	133°	125°	140°	2·5°

	South Australia. Milang Tribe. ♂.	Central Australia. ♀.	New South Wales. ♂.
B. N. I. Angle	53°	52°	54°
Frontal Curve Index	17·3	18·4	18·2
Frontal Curve Angle	141°	141°	141°

For a definition of the term 'third point' see text p. 69. In the figures relating to the 'third point' − means *in front of* and + *behind* the bregma, whilst Co. means coincident with the bregma.

The B. N. I. angle varies from 52° to 64°. The fact that twenty-one of the twenty-eight skulls examined presented an angle which ranged between 57° and 62° shows that there is a considerable degree of constancy in this respect and that the extreme conditions, both high and low, are not particularly common.

It will be seen from the table that the mean angle for the males (excluding the three specimens specially selected on account of their low-forehead formation) is 60·4°. The females show a slightly lower angle, but it is possible that this difference might not be maintained if a larger number of specimens were measured. Still we should not lose sight of the fact that the bregma is placed relatively further back in the female than in the male, and that the more acute B. N. I. angle in the former may be due to this.

For purposes of comparison I took contour-tracings and measured the B. N. I. angle of eight Scottish skulls. Seven of these were taken more or less at random, although it is right to state that I tried to include in the series one or two specimens which seemed to be more flattened in the forehead region than the others. Six of the selected skulls were males and one that of a female. The eighth, that of a male, and known as the Aberdeen skull, was included on account of its exceptionally low and degraded type of forehead. It was found during digging operations on the site of the old Blackfriars Monastery in Aberdeen and was described many years ago by Sir William Turner (9).

TABLE IV

Scottish Crania (6 male, 1 female).

B. N. I. angle and the Index of Frontal Curvature.

No. of skull.	1	2	3	4	5	6	7	Mean results.
B. N. I. angle . .	60°	60°	60°	61°	61°	62°	67°	61·5°
Index of the Frontal Curve	20·2	26·2	22·1	25·4	23·8	25·2	21·7	23·7

In the above table the B. N. I. angle is one degree higher than that obtained for the Australian male, and my belief is that this difference is a real and actual one. Still it must be noted that the higher mean obtained for the Scottish skulls depends upon the exceptionally large angle present in one specimen (No. 7).

In the examination of the Scottish skulls it became apparent that the differences in the angle were as much due to differences in

the level of the inion as to differences in the position of the bregma or of the degree of elevation of the frontal bone. Should this observation prove correct the stronger musculature in the neck of the Australian and the concurrent slightly higher relative position of the inion would account for any difference there may be in the Australian and Scottish B. N. I. angle. This is a matter which requires further investigation.

The Aberdeen cranium presented a B. N. I. angle of 53° (pl. vi, fig. 4). This is quite exceptional, but it shows that amongst Scottish skulls an angle as low as that in any Australian cranium may be encountered.

Degree of Frontal Curvature.

The predominant factor which determines the verticality or depression of the forehead is the degree of curvature or bulge of the frontal bone. This cranial character can be measured with considerable exactitude. Schwalbe employs two methods.

1. *Lissauer's method* (2). Two lines are drawn from the point of highest convexity of the curve to the two extremities of the frontal chord (nasion and bregma) (pl. vi, fig. 3, A.N. and A.B.) and the angle which these enclose is then measured. Schwalbe terms this the angle of the frontal curvature.

2. By measuring with a tape the mesial arc of the frontal bone from the nasion to the bregma and comparing the result with the length of the chord measured by the callipers between the same two points—

$$\frac{\text{Frontal chord} \times 100}{\text{Frontal arc length.}}$$

Lissauer's method requires a contour-tracing of the mesial arc of the cranium. It yields accurate results. The more open the angle the flatter the curve, and *vice versa*. According to Lissauer the angle is 171° in the gorilla and 120° in the negro. He also points out that in young skulls there is always a higher degree of curvature than in the adult.

The second method has as a disturbing element the varying degrees of projection of the glabella; in cases where the glabella is high the index exaggerates the degree of curvature and even in skulls with a low glabella the condition is not accurately expressed by the index.

There is, however, a simpler plan than that suggested by Lissauer, and one which is easier of application, less liable to errors arising from the manipulations involved, and which expresses the result in a more graphic and intelligible way. The height or degree of curvature of the calvaria is determined by dropping a perpendicular on the base-line (nasio-inial line) from the highest point of the mesial longitudinal cranial arc and comparing its length with that of the base-line—

$$\frac{\text{Calvaria height} \times 100}{\text{Length of nasio-inial base-line.}}$$

The same method may be applied to determine the degree of curvature of the several segments of which the mesial cranial arch is composed (pl. vi, fig. 3). The index of the frontal curve or frontal height may be ascertained thus :—

$$\frac{\text{Height of Frontal Curve} \times 100}{\text{Length of Frontal Chord (nasio-bregma line).}}$$

In the table given on p. 74 the angle of the frontal curvature and the index of the frontal curve are given for the twenty-eight Australian crania which have been studied.

The average frontal curvature angle for the male skulls from Victoria and Queensland is 133° ; in the female skulls of the same groups it is somewhat smaller, thereby indicating a higher degree of curvature. We can accept this as a sexual character.

In Schwalbe's memoir on Pithecanthropus the following measurements of the frontal curvature angle in different races are given :—

Negroes (10)	125·6°
Male Natives of Alsace (24)	131·3°
Kalmucks (4)	135·9°

It is interesting to note that the negro, according to these figures, has a stronger degree of frontal curvature than the European. There can be little doubt that the feature is one of some racial importance. The Australian presents a mean angle only slightly more open than that of the native of Alsace. At the same time it should be borne in mind that amongst the Australians an extreme degree of flattening of the forehead occurs with a considerable degree of frequency. In the twenty-eight skulls examined there were four specimens with an angle which varied from 140° to 146°. Three of

these were not included in the calculation which afforded the mean result. It is indeed a matter for surprise that in three of the Alsatian skulls measured by Schwalbe the angle was 140°, 140·5°, and 143°. Amongst a very much larger number of Scottish crania only one, the Aberdeen cranium, had an equivalent degree of frontal flattening, and it has always been regarded as a unique specimen in this respect.

As I have said, I am inclined to place more reliance on the results yielded by the index of the frontal curve than on the angle of the curve. A glance at Table III will show that the results obtained by the two methods correspond very closely; still there are slight discrepancies, and these I attribute to the difficulty attached to the estimation with absolute accuracy of an angle so open.

The mean index of the frontal curve in the male natives of Victoria was 22·4 and for the male Queenslanders 21·4. The mean index for the latter was reduced by the inclusion in this group of one skull with a very high degree of frontal flattening (No. 6).

The higher degree of frontal curvature in the Scottish (see Table IV) is indicated by a mean index of 23·7, although in the exceptional Aberdeen cranium the index fell so low as 15·9.

We have already referred to the higher degree of frontal curvature in the Australian female (mean index 23·7) than in the Australian male (mean index 21·8). This sexual character is also brought out by Schwalbe, who gives the angle of the frontal curvature for the female Alsatians as 129·6° and for the males as 131·3°.

There is little or no relationship between the B. N. I. angle and the index of frontal curvature; thus a low angle (56°) may be associated with a high degree of curvature (index of 25·4), or the same angle in two different skulls (60°) may be correlated with curvature indices of such different values as 13·2 and 26·2. Still, in cases where the angle falls below 55° the index of curvature is, as a rule, also low, e.g. skull of Milang tribe, the female skull from Central Australia, the male skull from New South Wales and the Aberdeen cranium (pl. vii).

The frontal bosses are usually very feebly developed in the Australian skull, and in many cases they are actually absent as appreciable eminences. A median frontal ridge is very common in the male. It was present in most of the Victorian males; in the Queensland skulls, on the other hand, it was, as a rule, absent; in fact, in only two specimens could it be said to be present.

EXPLANATION OF PLATES V–VII

PLATE V

FIG. 1. From Schwalbe's Memoir on Pithecanthropus (3). Diagram to show the different positions of the bregma as the frontal bone is raised or depressed, and also to illustrate Schwalbe's method of estimating the extent of these changes. The diagram has evidently been constructed from the contour-tracing of one skull, and the upper and lower dotted outlines of the frontal bone have been obtained by rotating this upwards and then downwards around the nasion as a centre.

FIG. 2. Mesial contour-tracing of the fore-part of an Australian cranium. Two points, 26 mm. distant from each other, are marked on the cranial vault, with the bregma (B) between and equidistant from each. To each of these points a line is drawn from the nasion (N) and the angle in each case measured. This may be considered to give approximately the limits of variation in the B.N.I. angle due to variability in the position of the bregma.

PLATE VI

FIG. 3. Mesial contour-tracing of the cranium of a female Australian. I.N. Base-line. N.B. Nasion-bregma line or the frontal chord. B.N.I. Bregma-nasion-inion angle. A. Highest point of frontal curvature. B.A.N. Lissauer's angle of the frontal curvature.

FIG. 4. Mesial contour-tracings of the fore-parts of three skulls, which show a very different conformation in the forehead region. In the upper Scottish skull the bregma is placed unusually far forwards and the frontal bone presents a high degree of convexity; in the lower Scottish skull (the Aberdeen cranium) the forehead is flat and depressed. The common base-line upon which the tracings rest passed through the inion and nasion in each case.

PLATE VII

FIG. 5. A series of mesial contour-tracings of the forehead arranged on a common base-line which extended through the nasion and the inion in each case. The B.N.I. angle is given and the tracings have been selected with the view of showing a regular gradation according to the magnitude of this angle.

With the exception of the last five tracings on the lower base-line, all the tracings have been taken from Australian skulls, and further particulars regarding each may be obtained by referring to Table III, p. 74 of the text.

V. indicates a Victorian skull; and Q. a Queensland skull; and the numbers associated with these letters give the Museum numbers of the specimens. N.S.W. is the New South Wales skull; MILANG, the Milang skull; and C.A. the female skull from Central Australia. The three last specimens are referred to in the lower part of Table III.

M., JOE, R.L., and M.S. are frontal tracings from the crania of four microcephalic idiots.

GOR. is the frontal tracing of a young female gorilla, the skull of which is in the Anatomical Museum of Trinity College, Dublin.

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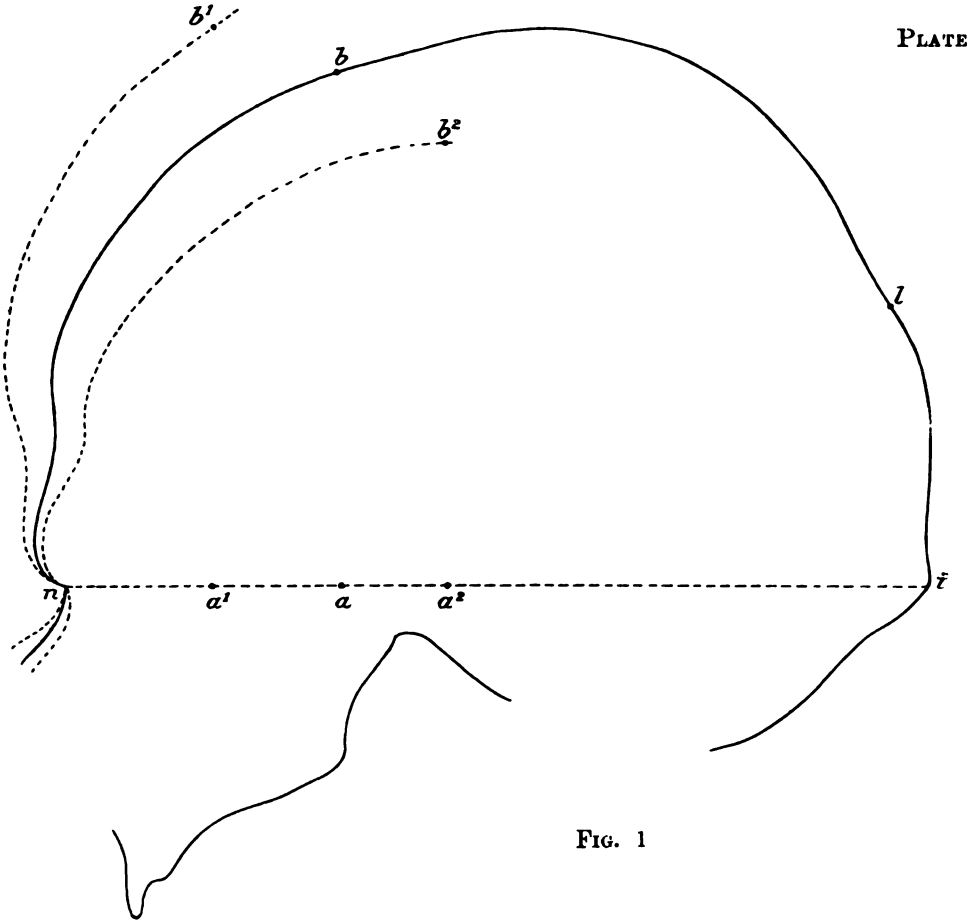


FIG. 1

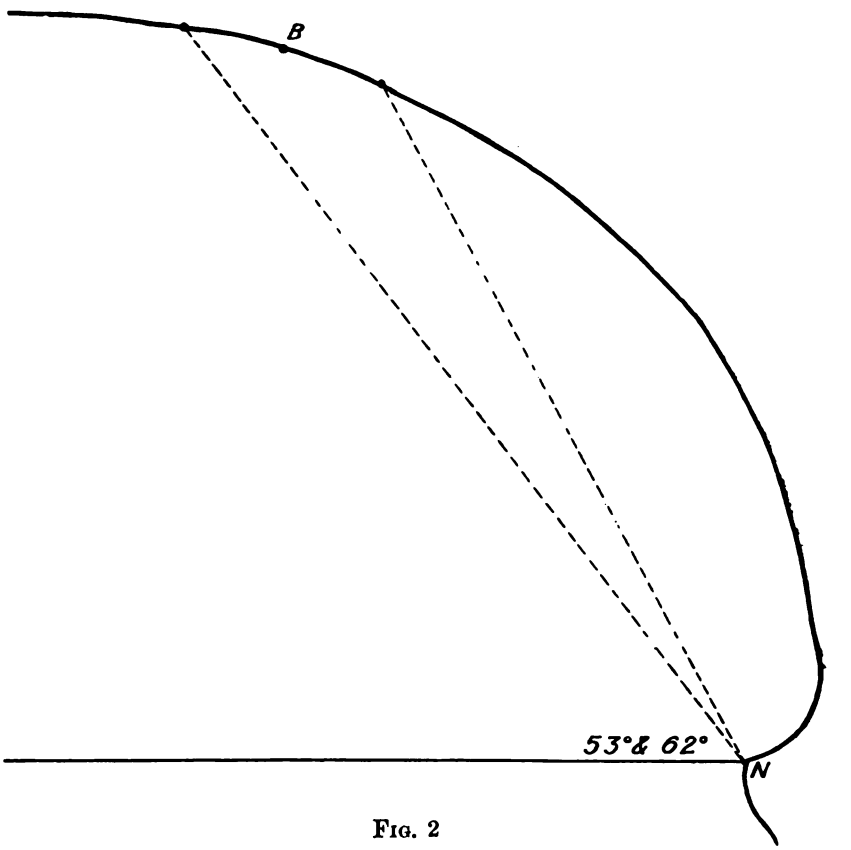


FIG. 2

Fig. 1. Schwalbe's method of showing elevation and depression of the frontal bone.
Fig. 2. Mesial contour-tracing of the fore-part of an Australian cranium.

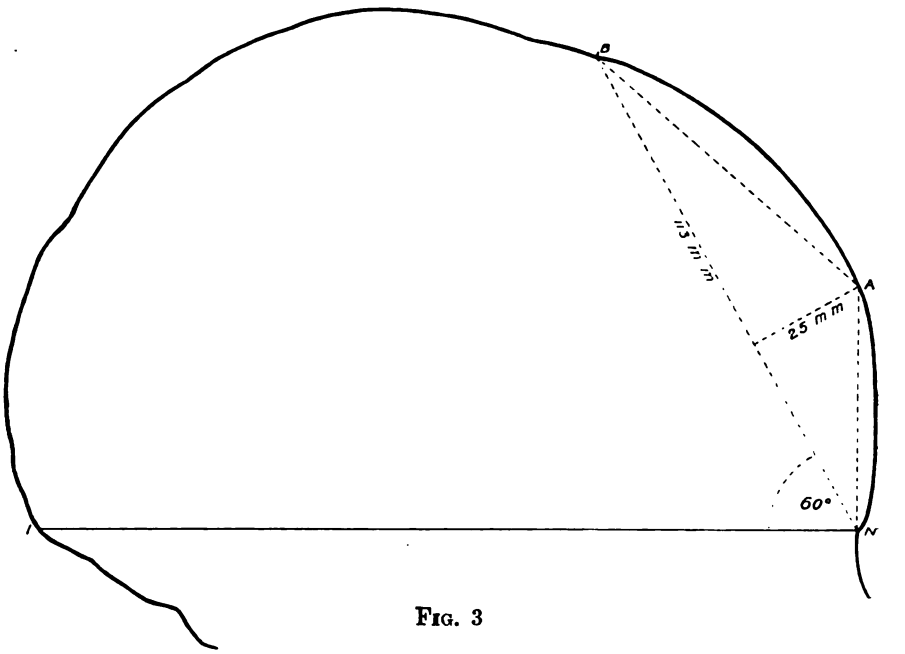


FIG. 3

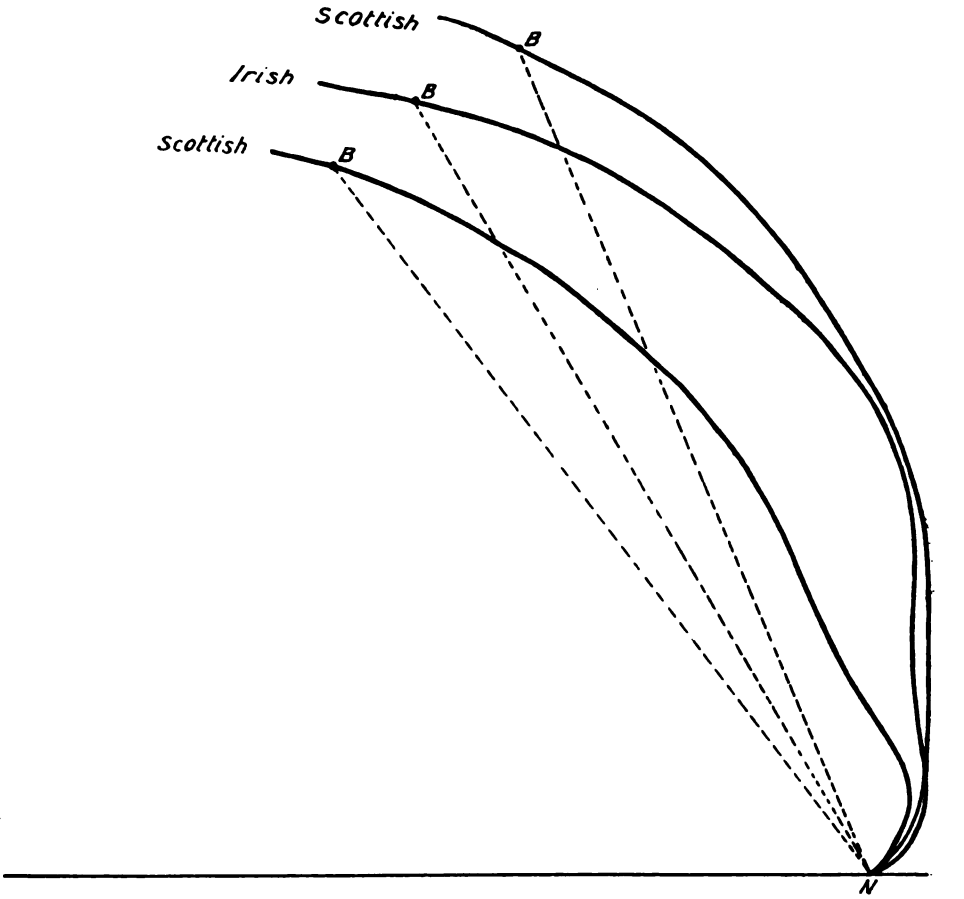


FIG. 4

Fig. 3. Mesial contour-tracing of the cranium of a female Australian.
Fig. 4. Mesial contour-tracings of the fore-parts of three skulls; showing variations.

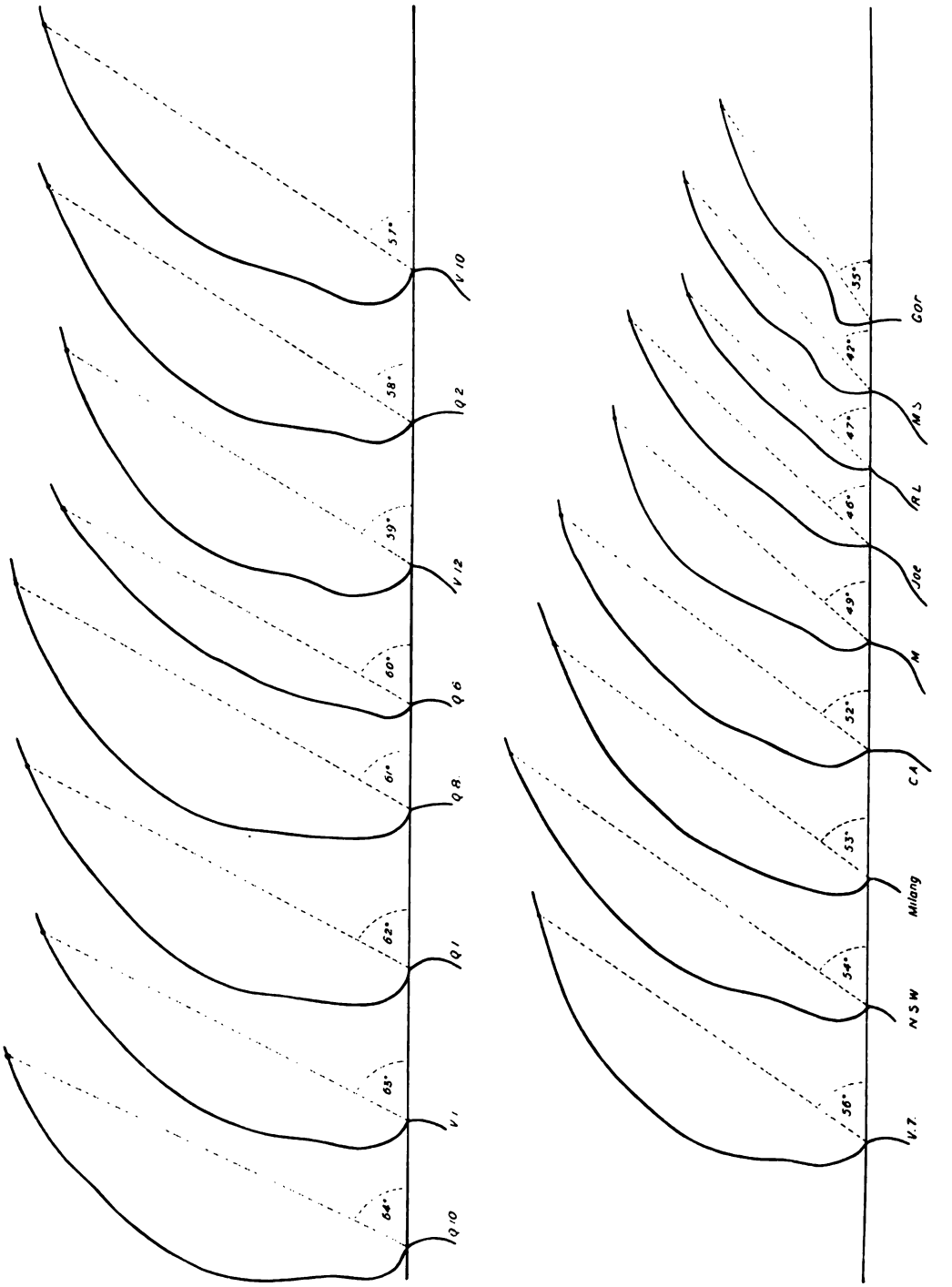


Fig. 5. A series of mesial contour-tracings of the forehead.

THE PLACE OF THE 'SONDER-GÖTTER' IN GREEK POLYTHEISM

By L. R. FARNELL, D. Litt.

It has been said that all study of popular religion is a study of popular psychology; and this is true so far as our main object is to discover the feelings or ideas that underlie the ritual or external act of worship, the early and often prehistoric thought that inspired it, as well as the later thought of any given historic period. This is especially difficult in regard to a class of cult-figures in Greek religion that may seem to belong, and have been explained as belonging, to an older stratum of national belief than that with which the Greek student is familiar, a 'polydaemonism' rather than a polytheism. These figures are in some sense nameless, in that they seem to have possessed no substantival proper names but merely appellative epithets which usually reveal the narrow function or department to which their daemonistic agency may have been confined. As a rule, there is little legend attaching to them, they have rarely a genealogy or family history, but appear as barren and isolated personalities standing apart from the warm life of Greek polytheism. They seem at first sight nothing more than shadowy potencies of the field and fold, of the human household or state, or sometimes of the arts and higher functions of life, and they are called indifferently Θεοί, Δαίμονες, Ἥρωες. For the purposes of a general survey, we may classify them according to their departments. As powers of the field and the crops the record gives us Εὔνοστος at Tanagra, the hero who brings a good yield of corn, Ἐχετλαῖος ἥρως, the well-known 'hero of the ploughshare' at Marathon, Κυαμίτης, the bean-hero, whose shrine was on the sacred way to Eleusis; with these we may consider Αὐξησία of Aegina, and Θαλλώ and Καρπώ, the Attic Hours, and Ἐρίβοια, the cattle-goddess of Lesbos, and perhaps we may bring into this company the δαίμων ἐπιδώτης of Sparta, 'the giver of good gifts.' With the guardianship of the life of the family and the fostering of children

are associated certain doubtful personages such as Κουροτρόφος, 'the nurse of children,' Καλλιγένεια, 'the giver of fair offspring,' Ἀμφίδρομος, a δαίμων whose personality was perhaps invented by Aeschylus and who arose from the Ἀμφιδρόμια, a ritual at which the new-born child was solemnly carried round the hearth-fire and named in the presence of the kinsmen; we may also remember that Charondas speaks of certain δαίμονες ἑστιοῦχοι, powers of the sacred hearth. Sometimes a hero or daimon might protect the gateway of the house or city or the city-walls or the entrance to the temple, as we hear of a ἥρως πρὸ πυλῶν in Thrace, of an ἐπιτέγιος ἥρως and τειχοφύλαξ at Athens, the guardian of roof and wall, of Κλαϊκοφόρος, the 'holder of the temple-keys', at Epidauros. At the banquet, not only were the high gods remembered, but possibly such personages as Δαίτης at the later Ilium, Ἀκρατοπότης at Munychia, Δειπνεύς in Achaia, Κεράων and Μάττων at Sparta, and if we had only the name to guide us we might associate with these the δαίμων ἰσοδαίτης, the daimon who presided 'over the equal feast'. Again, the potter's art at Athens seems to have required a ἥρως κέραμος, the medical a ἥρως ἰατρός at Marathon, Athens, Eleusis, the nautical a ἥρως κατὰ πρύμναν at Phaleron, and a ἥρως στρατηγός is mentioned in an Athenian inscription. The enigmatical name Βλαύτη occurs on an inscription of a late period found on the Acropolis, from which we learn that she shared a shrine with Κουροτρόφος. We might be tempted to accept Köhler's suggestion that the word is really Βλάστη, an appellative of a spirit of vegetation. But the letters as they are given in the Corpus Inscriptionum Atticarum appear to have been correctly transcribed. If we may trust a gloss in Pollux, there was a ἥρως ἐπὶ βλαύτῃ at Athens, and βλαύτη was the name of a kind of sandal, and we seem to be dealing with the patron saint of shoemakers, though why such a person should have shared the shrine of Κουροτρόφος is not easy to explain. Such figures appear to have been comparatively numerous in Attica, for to those already mentioned must be added the ἥρως Στεφανηφόρος at Athens, the Σπουδαίων δαίμων on the Acropolis, a kindred personage to the δαίμων ἐπιδώτης or the Ἀγαθὸς δαίμων, and Τελεσίδρομος at Eleusis, apparently a hero presiding over the athletic contest in the Eleusinian festival. At Delphi, a parallel figure to Τελεσίδρομος has been discovered in Εὔδρομος, whose chapel is attested there by a fifth-century inscription, the hero to whom the runners prayed. At Lesbos we recognize a daimon of the weather, whose function possibly

was to give the favourable breeze, in Ἐτηφίλα or Πνιστία Ἐτηφίλα, mentioned with Poseidon in a long ritual inscription. And at Knidos the Ἐπίμαχος mentioned in an inscription already noticed may belong to the adjacent name of Pluto, though it does not seem to be an epithet natural to this god, or it may be the appellative of a distinct cult-figure. The list closes with the names of two whom we should rather expect to find in the Roman Indigitamenta than in a catalogue of Greek heroes, the hero 'who frightened horses' in the race-course at Olympia and on the Isthmus, and the 'Fly-catcher' at Aliphera in Arcadia, Ταράξιππος and Μυίαγρος.

To the same stage of religious psychology at which these cult-figures might seem likely to have developed may have belonged those vague groups of divine personages that are also characterized by a functional appellative rather than by a proper or substantival name; for if the single functional daimon appears to lack individuality and concrete personality, compared with the high gods and goddesses of polytheism, groups of such characters united only by a single functional name will be likely to be still more shadowy and amorphous. While detailed criticism of these may be reserved for the present, the following list presents them in alphabetical order.

The Θεοὶ Ἀποτρόπαιοι were worshipped at Sikyon near the grave of Epopeus, the mythic ancestor; and, as Pausanias tells us, rites were performed to them such as were usual among the Greeks 'for the turning aside of evils': his words imply that there were images of them erected near the grave: the Θεοὶ Γενετυλλίδες and Κωλιάδες were deities of childbirth much worshipped by Attic women, greatly to the sorrow and cost of the husbands, if we may trust Lucian: the Εὐδάνεμοι appear to have been a group of weather-daimons or wind-charmers, to whom an altar was consecrated in the Kerameikos and apparently another at Eleusis. The Θεοὶ Καθαροὶ at Pallantion in Arcadia are the subject of a very interesting note in Pausanias: 'there is a temple of Θεοί still standing on the top of the ridge: they are called Καθαροί, and oaths on matters of the greatest import are taken before them. The people do not know their names, or knowing them are unwilling to pronounce them. One may conjecture that they were called Καθαροί because Pallas offered to them a different kind of sacrifice from that which his father (King Lykaon) offered to Zeus Λύκαιος.' Pausanias has probably the Delian altar in his mind that was called Καθαρός because no blood was ever shed

upon it. The Θεοὶ Μειλίχιοι at Myonia in Lokris may have been a similar concept: we can gather that they were chthonian powers, to whom rites of purification for sin, probably the sin of bloodshed, were performed by night. Certain Θεοὶ Μυλάντειοι are mentioned by Hesychius and defined as 'deities of the mill'; but his explanation is very doubtful; he elsewhere speaks of a Προμυλεύς, a goddess whose statue was erected in corn mills. More important is the worship of the Θεοὶ Πραξιδίκαι on Mount Tilphossion, near Haliartos. Pausanias mentions their hypaethral temple there and adds that the oaths taken in their name had the most binding force. It may have been a Minyan migration from this part of Boeotia that brought the cult to the shores of Laconia near Gythion, where Pausanias found in the popular tradition the reminiscence of a Θεὰ Πραξιδίκα, whose cult was associated with the return of Menelaos from Troy. The significance of the name is obvious; the Πραξιδίκαι are local variants of the Ἐρινύες, their appellative expressing more clearly the abstract conception of moral retribution. The Φαρμακίδες at Thebes may once have been the vague personages of an early cult, and akin to the Εἰλείθυιαι, the divine powers that could aid or retard childbirth.

Before raising any further question about such groups, or considering how the conception of divinity that attaches to them differs from that of ordinary polytheism, it may be well to put oneself on one's guard. A divine group united by some common appellative may have consisted merely of some well-known high gods, whose figures were as concrete and well defined within the group as without it. For instance, the term Θεοὶ Ἀγοραῖοι certainly describes no shadowy company of half-formed δαίμονες, but denotes the deities whose statues happened to stand in the Ἀγορά, and these were usually Zeus, Hermes, Apollo, Athena. Or again, the Θεοὶ Προδομεῖς, who were worshipped at a ἑστία in Megara, may indeed have been a group of nameless 'functional' δαίμονες, who had to be appeased before the building of cities; for, according to the legend, sacrifice was offered to them by Alkathous, the founder of Megara, before he began to erect the wall: but the context suggests that Apollo, the god who was pre-eminently the city-builder, was one of them, and that we should explain them differently, as the deities whose statues 'stood before the houses', such as Apollo, Artemis, or Hekate. Similarly the Θεοὶ Φρήτριοι at Naples, known to us only through inscriptions of the Roman period, appear to have been worshipped, not as the heroic ancestors of the clans, but as the deities who

presided over the organization of the phratry. In other parts of Greece these were certain well-defined divinities such as Zeus, Athena, even Poseidon: and perhaps the group at Naples consisted merely of such figures as these. Or the designation may have acquired a certain quasi-Roman vagueness, and connoted, for instance, Zeus, Athena and 'some others', the vaguely comprehensive term being chosen so that no deity might be offended by inadvertent neglect.

Finally, we can say nothing positive about the Ἀλκίδαι, the name of 'certain gods in Lacedaemon', as we learn from the doubtful authority of Hesychios. If the gloss is correct, we may have here either the appellative of vaguely conceived divinities, who never acquired proper names, and were known only as the 'mighty ones', or the complimentary title of certain ordinary and well-known personages of Greek polytheism.

It is quite possible, then, that in these latter instances there is no distinct religious fact that wants explaining. The case may be otherwise in regard to the other groups: and we must consider these in connexion with the cults of those separate δαίμονες or ἥρωες above enumerated, who are known to us only through adjectival appellations, not by any proper or substantival names. The important question is whether all or some of these are the products of an earlier prehistoric stage of religious thought, a stage of what may be hypothetically called 'polydaemonism', a conception preceding in the history of our race the emergence of such articulate and concrete individualities as are the anthropomorphic figures of Greek polytheism. Before going further in the examination of this question, it is proper to consider whether the name δαίμων, which is attached to many of these indeterminate figures, affords us any clue. The etymology of this word, even if it were certain, is no sure guide. Its literary and popular usage may be shortly stated thus: in the Homeric poems it is synonymous sometimes with θεός and designates a personal deity: frequently it expresses for Homer the more abstract divine force, especially fate or the destiny of man's life, and, in a narrower sense, the doom of death. Hesiod twice employs it in this sense, and twice applies it to individual men or demigods who have become glorified after their death or during their life: he nowhere clearly uses it as a synonym for the personal higher gods. In a fragment of Alcman (69) it occurs in an impersonal sense, meaning apparently the distribution of human lots. Empedocles uses the term—not

indeed as an equivalent for the ordinary human soul, as Rohde supposes—but for the immortal prenatal soul which, having offended some divine law, is cast out from heaven, and, descending into a man, passes through a long cycle of existences: with this view we may connect the later application of it, which is sometimes found, for instance, in Pindar and Menander, to a man's personal genius. On the other hand, from the fifth century downwards, it bears two senses, both of which are concrete and anthropomorphic; the Tragedians can designate as δαίμων the deceased hero or heroine, Darius or Alkestis; and the popular usage was often in accord with them, for the ferocious spirit of Temesa was a δαίμων, but he was also the Ἥρως, the companion of Odysseus who was slain by the inhabitants. Finally, the word came often to denote an inferior or subordinate deity, as in a Dodonaean inscription we find θεοὶ ἥρωες δαίμονες given as a full classification of all the divine powers to whom prayer or sacrifice might be offered. In this sense Attis and the Korybantes are called Δαίμονες.

It may be that Θεοί and Δαίμονες have both been handed down from an equally ancient stage of Hellenic speech, both applicable in the same sense to 'gods': and we may find instances in other languages for the co-existence of synonyms expressing the same idea of divinity. The terms will probably tend to differentiation, as, in fact, δαίμων became variously differentiated.

But the origin of terms does not concern us here. It is sufficient to note that when applied to these cults which we are examining—of which the record is comparatively late—it need not be regarded as investing the cult-figure with a vaguer or more impalpable or abstract character than that of the Olympians themselves. On the other hand, we must lay stress on the fact that most of these personages in the scanty list given above, which I have endeavoured to make complete, are designated as ἥρωες: and the value of this term for the popular imagination is at least clear: it denoted a glorified man once existing upon the earth. Therefore the Ἥρως Ἐπιτέγιος or Ἐχετλαῖος is *qua* Ἥρως as real and palpable a personage as Apollo or Hermes. If his personality is to be regarded as a survival from a period of vaguer and more amorphous religious conception, it must be on the ground of his designation by a mere appellative and the absence of a personal and concrete name.

The facts so far set forth have been made part of the foundation of a far-reaching theory promulgated by Dr. Usener in a

treatise on the Götternamen, a work of importance and value, of which the main results appear to have been rather widely accepted. This is no place for detailed criticism, but some consideration of his leading principles and conclusions is essential here. He correlates the Greek facts with the Roman Indigitamenta and certain phenomena he has observed in the Lithuanian religion; and the conclusion towards which he draws is that the Indo-Germanic nations, on the way to the higher polytheism, passed through an earlier stage when the objects of cult were beings whom he designates by the newly-coined words 'Augenblick-Götter' and 'Sonder-Götter'; that out of these the 'Olympian order', the concrete anthropomorphic gods of Greece and Italy, of the Indo-Iranians, the Persians and Slavs, were evolved, whose more vigorous personalities absorbed the earlier and vaguer forms, and whose concrete proper names now attracted to themselves the mass of adjectives and epithets that were once the independent and sole designation of the older divine beings; finally that traces of this evolution can be found in certain later survivals of the historic cults.

Now the importance of the theory very much depends on what we mean by a 'Sonder-Gott'. Dr. Usener develops his definition from Varro's phrase—certi dei—which occurs in a passage of Servius[1]: 'pontifices dicunt singulis actibus proprios deos praeesse, hos Varro certos deos appellat.' He finds the essential characteristic of a Sonder-Gott, first, in the narrow limitation of his nature or concept, which seems relative only to a particular act or state, or even to a particular moment in that act or state; secondly in the open transparency of the name which, whether substantival or adjectival, expresses just the single function that the divine being exists to perform.

So far we may accept this as prima facie a fair account of the complex Roman system which is presented in the Indigitamenta. We owe the statement of this system to the Christian Fathers, Arnobius and Augustine, who reproduce Varro, and Varro appears to have drawn from the pontifical books. As regards the absolute authenticity of this record, I cannot express an opinion: it may be that some of these appellatives in the Indigitamenta are only thin disguises of well-known concrete gods, such as Faunus and Jupiter, as an American scholar, J. B. Carter, has endeavoured to prove in a treatise 'de deorum Romanorum cognominibus'. But, if we

[1] *Aen.* ii. 141.

accept the main account of Varro as authentic, we may well sympathize with St. Augustine's humorous protest against the abnormal 'religiosity' of the Romans that seemed to leave nothing to unaided human initiative. And it is very difficult to find the right expression by which to designate this system in terms of the ordinary nomenclature of anthropology. It cannot be called fetichism, still less pantheism. If it really was to the Roman as it appears to us, we may be tempted to regard it as a very abstract and spiritual form of animism. If it be a right account of animism that it endows inanimate and material objects with quasi-human consciousness and emotions, and sometimes with a supra-human power and volition which suggests worship, we may perhaps extend the term to cover a religious system that imagines an immanent semi-conscious or subconscious divine potency to reside in passing acts and states of man or fleeting operations of nature.

This leads us to the next consideration, which is of still greater importance. Are these 'Sonder-Götter' conceived as personal gods? Dr. Usener does not always speak quite clearly on this point; he maintains, on the one hand, that a few of them can be proved to have had a personal reality for the Italians, yet his tendency is to distinguish this Roman system, which he finds also in Greece and Lithuania, from the polytheistic belief in personal gods. If this distinction on the ground of personality is justified, it is vital; because in tracing the evolution of religion, and in classifying recorded or existing forms, the most far-reaching principle of classification is the distinction between the anthropomorphic and non-anthropomorphic forms of belief, the personal and the impersonal or half-personal objects of reverence.

Supposing, then, that the above-given account of the Sonder-Götter is correct, have we the right to regard them as belonging always and everywhere to that more primitive stage of belief which preceded polytheism and led up to it? Looking first at the minute specialization of divine functions on which the system is based, we cannot regard this as a decisive test of primitiveness. Such specialization may indeed be found among early races, nor am I inclined to believe in the neo-totemistic dogma 'one clan one totem-god'. Some of Dr. Usener's Lithuanian parallels may be accurate illustrations of the species that he is formulating, though I do not recognize the value of all of them; certainly 'the Fly-Buzzer God', a Lithuanian form of Μυίαγρος, the 'God of the Besom', the 'God that makes the grass

green', the 'God who makes the beer sour', these are deities with a distinctly Roman flavour about them. Having tried to go further afield I have been able to find only a few exact parallels. Dorsey, in his 'Study of Sioux cults', mentions the Indian's invocation of his hunting-trap and all the various parts of it, and his prayers to the tent-pole, which are quite after the fashion and spirit of the Roman Indigitamenta. Traces of the same system seem to appear in the religion of the Kenyahs, a tribe on the Baram river in Borneo, described by Messrs. Hose and McDougall[1]: 'Balli Atap (Atap = roof) is the spirit or god that protects the household from harm of all sorts,' and reminds us of the Ἥρως Ἐπιτέγιος at Athens; and in the prayers of certain heathen tribes in Russia we may detect the same 'Indigitamenta' style.[2] But I imagine we should find this rigorous apportionment of special functions, this minute articulation of the divine world, at least as frequently in the latter days of a well-organized polytheism, of which it is often a mere by-product. While many of the personal gods in Greece expanded their individualities and widened their range of functions, many were obliged to contract and to specialize. Ares and Pan were once more manifold gods than they afterwards became; and the same is true of Aphrodite and Eros, and in some degree of Artemis. And such personal deities as Eros and Asklepios beget such transparent and limited personages as Himeros and Pothos, Iaso Akesis, Panakeia: while Νίκη, Πειθώ, Νέμεσις, most absolute Sonder-Götter, are late products of polytheism, and the first two, if not the third also, are probably emanations of concrete and personal deities.

The specialization of functions, then, is not a test that helps us to distinguish the 'Sonder-Götter' system from personal polytheism, or to assign the former of necessity to a more primitive stage. But the greater or less degree of anthropomorphism in these strange Greek, Roman, and Lithuanian forms, if we could appreciate it, would be a much more important clue. And it is in dealing with this question that Dr. Usener's work appears least satisfactory.

It is obvious, as Mr. Warde Fowler and other writers on Roman religion have often pointed out, that it was far less anthropomorphic than the Greek, that it presented less concrete individualities to the imagination. The chief deities of the Italic tribes were personal and anthropomorphic in so far as they were distinct in sex and were

[1] *Journ. Anthrop. Inst.*, 1901, pp. 174–5.

[2] *Archiv für Religionswissenschaft*, 1906, p. 284.

worshipped occasionally with idols; but the high powers of the Roman religion seem to stand apart, each for himself or herself, in a cold aloofness. Little or no myth is told of them, rarely a legend of marriage or affiliation. Were, then, Inuus, Occator, Dea Panda, Deus Lactans, Dea Mena, and all the crowd of deities of procreation, nutrition, and birth, invested with a personality very much vaguer and thinner than were Vesta and Minerva? And, if so, are they to be regarded as the survivals of an older stratum of religion, or rather as the late development of a certain logical tendency in Roman religious thought? The record is late, and gives us little more than a bare list of names; and no clue is offered by any tradition or any reported ritual. Nor is this a place to attempt the solution of the Roman problem.

As regards the Lithuanian evidence, the exposition of it by Dr. Usener fails to show the different degrees of strength with which the various functional agencies in his list were personified, or to distinguish between the more concrete and the vaguer forms. It is very interesting in itself, but I do not think it solves this particular problem of Greek polytheism.

We can now confine our attention exclusively to the Greek evidence. We have every reason to believe that the Hellenic perception of divinity had become concrete and precise at a very early period[1]; even if theriomorphism occasionally prevailed, the clear outlines of the divine personality need not have been much impaired; there is nothing necessarily vague or nebulous about a horse-headed Demeter. Moreover, the chief divine personalities had at an early period become anthropomorphic. The view is quite tenable that many of the anthropomorphic deities were already the common possession of the Greek tribes before the migration into Hellas. The extreme antiquity and obscurity of most of their personal names would itself support this view. And the impulse in Greek religion towards the creation of clearly outlined personal forms was a devouring impulse that might well have obliterated the traces of a previous more amorphous animistic system. Yet such traces may be found, and in other directions more clearly perhaps than in the domain of the 'Sonder-Götter'. The worship of the stone, the pillar, the tree-trunk, even the axe, is proved of the prehistoric period, and it survived in the historic. It is sufficient to observe here that such aniconic cults are compatible and often contem-

[1] Dr. Usener himself admits this, p. 302.

poraneous with an anthropomorphic and personal conception of the divinity, though they may have arisen under the influence of animism, fetichism, or from mere 'teratology'.[1] Thus the 'Mycenaeans' possessed human and personal gods, though their ἀγάλματα were the pillar, the tree, or the axe: as witness we have the sacrificial scene on a Mycenaean gem, possessed and recently published by Dr. Arthur Evans, where a god is seen hovering above his own pillar, having been evoked by the prayers or the ritual. But the Arcadian cults of Ζεὺς Κεραυνός, Ζεὺς Καππώτας, in which Zeus was actually identified with the thunder and the meteor-stone, and the fetich-worship of the sceptre of Agamemnon at Chaironeia, seem to belong to some primitive stratum of pre-anthropomorphic religion. We must believe in the existence of this stratum in the buried soil of the Hellenic or pre-Hellenic religions as a 'vera causa' that might explain certain anomalies among the religious facts of the historic period.

But it is very doubtful if we need invoke the aid of this hypothesis to explain the facts upon which Dr. Usener has built his theory; and there are some that it would fail altogether to explain. There is one important point that we must insist on at the outset. A god is not necessarily nameless because he is not named or is usually addressed by a simple appellative. There are many reasons for concealing the proper name. One is the superstitious fear that the enemy may come to possess it, and work evil through the magical power that the possession may give him. For the same reason many savages conceal their own true name and the names of their friends; and this is occasionally found even in civilized communities; as, for instance, it was improper to mention the personal name of the δᾳδοῦχος at Athens on account of his sacred character. Again, it was ill-omened to use the name of the deities of the nether world, because of their associations with death. Thus arose euphemisms for the name of Hades; and the designation

[1] Statements about the animistic worship of stones and trees are often deceptive; the words of Miss Alice Fletcher in the *Peabody Museum Reports*, vol. iii, p. 276, 'Careful inquiry fails to show that the Indian actually worships the objects that are set up or mentioned by him in his ceremonies. The earth, the four winds, the sun, moon and stars, the stones, the water, the various animals, are all exponents of a mysterious life and power encompassing the Indian and filling him with vague apprehension and desire to propitiate. . . . These various objects are stopping-places of the god,' may serve as a correction of hastily gathered impressions.

of the god and goddess of the lower world as ὁ Θεός and ἡ Θεά, which came into vogue at Eleusis in the fifth century B.C., may be due to the same motive, and need not be supposed to have descended from a system of nameless deities of dateless antiquity. A similar feeling prompted the habit of passing the graves of the dead, and especially of the dead hero, in silence; and from this practice the buried hero at Oropus received the name Σιγηλός. And as many heroes came thus to be designated simply as ὁ Ἥρως, the personal names could easily pass out of recollection. What was superstition in one age becomes merely respectful reserve in another; and the modern man rarely speaks of God by any personal name, but most frequently by some vaguer title such as 'the Deity'. At Bulis, near Phokis, the chief god was always addressed merely by the worshipful title of Μέγιστος, and never by any proper name, according to Pausanias[1]: but there is no reason to suppose that they had not advanced as far in the evolution of anthropomorphic and concrete divinities as their neighbours, or to gainsay the view of Pausanias, that Μέγιστος was none other than Zeus himself.[2]

We may next observe that many of the divine appellatives that Dr. Usener presses into the support of his theory are no signs of any earlier and distinct religious stage at all, but are as anthropomorphic in their connotation as any individual proper name, and many have a generally descriptive and no functional sense whatever, and therefore are by no means to be compared with the Roman Indigitamenta. For instance, we find in him the strange suggestion (which is almost a *reductio ad absurdum* of his theory) that Demeter Ξανθή derived her appellative from an old god called Ξανθός; the only person so named was a secular hero, and there is no evidence of a divine personage so called except for those who hold, like Dr. Usener, the almost obsolete and very narrow theory that all popular heroes of epic and legend were the faded forms of forgotten gods. But let us grant a god Ξανθός, or a goddess Ξανθή. There is nothing 'functional' about

[1] 10, 37, 3.

[2] It is particularly in the Eastern Hellenized world, in various districts of Asia Minor, especially Phrygia, that we mark the tendency gaining force in the later period to designate the divinity by a vague descriptive name of reverential import, such as 'the Highest God': two newly discovered inscriptions of the Roman period at Miletus show the existence there of a cult of ὁ ἁγιώτατος θεὸς Ὕψιστος Σωτήρ, who was a god of divination and served by a προφήτης.—*Arch. Anz.*, 1904, p. 9.

the adjective name, nothing vague: it has more obvious anthropomorphic connotation than the names Apollo, Athena, &c. It no more marks a distinct stage in religious thought than two such formally different names of individual men as 'White' and 'Wright' mark two different stages in the development of our personal consciousness concerning our fellows.

Still less relevant to the hypothesis of 'Sonder-Götter', or a system of specialized functional divinities vaguely and almost impersonally conceived, are such popular titles of divinities as Σώτειρα, Δέσποινα, Βασίλη. Was there ever an imaginable stage in Aryan religion when deities were brought forth immaturely with nothing more concrete to cover them than the vague 'function' of 'Ladyship', 'Queenship', 'Saviour Power'? Surely such names are the natural adjuncts of personal religion, and belong to the ceremoniousness of personal worship. Σώτειρα is here Kore, there Artemis, elsewhere Athena; it is certainly difficult to imagine her before she was any one at all in particular. And if we could, we still could not call her a Sonder-Göttin according to the definition. In many parts of the Mediterranean, long before Christianity, a virgin-goddess Παρθένος was worshipped and known by no other name. Yet she need not have been evolved to fulfil no other 'function' than to be maidenly, but probably had in the people's imagination as marked an individuality and as concrete a character as the Holy Virgin in our own religion. We should scarcely say that the proper name 'Mary' and the appellative 'Holy Virgin' reveal two distinct stages of religious thought. The Goddess Ἀρίστη, 'the Best,' may have been worshipped at Athens, Metapontum, and Tanagra, without a proper name, but may have been as personal an individual as Artemis.

In fact, apart from the above considerations, the number of deities and heroes in Greece who can be proved to have existed in cult without a proper name is exceedingly small. Dr. Usener endeavours to enlarge the stock by what appears to me to be faulty logic; by the suggested rule, for example, that when two or more deities have the same epithet in common we should conclude that the epithet had a separate previous existence as the appellative of a 'Sonder-Gott'. The cogency of this does not appear; every personal deity was liable to be called Ἀλεξίκακος, every goddess or heroine Λιπαράμπυξ or Βαθύκολπος. More than one Greek divinity was called Μειλίχιος, a term usually connoting the character of the

nether-god, and we have a cult-record of ὁ Μειλίχιος, as we have of ὁ Θεός alone. But this is no reason for supposing that Zeus Μειλίχιος became so by absorbing an older and vaguer 'numen' called 'Μειλίχιος' who had once half-existed in shadowy independence; for we note that Μειλίχιος is a word of later formation within the same language than 'Zeus'.

Again, his theory does not sufficiently appreciate the important fact, of which, however, he is cognisant, that we can already discern the bright personal deities of Greek polytheism throwing off their epithets as suns may throw off satellites, the epithets then becoming the descriptive names of subordinate divinities or heroines. Examples of this process have often been given and discussed. It is a tenable belief that Aphrodite threw off Peitho, Athena Nike, Poseidon Aigeus; the most transparent fraud of all was the emanation of a useless and colourless hero Πύθιος from Apollo Πύθιος. In Thera the people were especially prone to call the high gods by their appropriate appellatives. The inscriptions[1] show an Apollo Δελφίνιος styled Δελφίνιος, Zeus Ἱκέσιος Στοιχαῖος Πολιεύς Ὅρκιος invoked by these epithets alone. The nether-world god becomes addressed as 'the Rich One', 'Πλούτων', 'He of good counsel,' Εὐβουλεύς, the 'Placable One', 'Μειλίχιος'. Adjectives are more affectionate and the people love them; they are also a shorter style. The process of detaching an epithet from a deity and forming from it a new divine personality is found also in the Vedic religion. 'Rohita, originally an epithet of the sun, figures in the A V. as a separate deity in the capacity of a creator.'[2]

Bearing these facts in mind, we may now consider again in detail the short list of 'functional' and appellative heroes, daimones, or gods, which was given at the beginning of this paper. We shall rarely find that they accord with the definition of Sonder-Götter or betray a pre-anthropomorphic imagination. The heroes of the drinking-bout and festive meal, Ἀκρατοπότης, Δαίτης, Δειπνεύς, Κεράων, and Μάττων, are functional, but being heroes are conceived as personal and human; and none can be said to savour of prehistoric antiquity, but are obviously late creations. As there was no high god that had charge of the banquet, Greek polytheism, following its natural instinct, creates Δαίτης and Δειπνεύς, and obeying its overpowering bias towards anthropomorphism and con-

[1] *C. I. G.*, *Ins. Mar. Aeg.*, iii, p. 80. [2] Macdonell, *Vedic Ritual*, p. 115.

crete forms conceives of them as heroes; and as it was necessary to invent a name it was more natural to choose appellative descriptive names than to coin irrelevant proper names. Nor is it inconceivable that Ἀκρατοπότης was a distant descendant of Dionysos Ἀκρατοφόρος, who was known at Phigaleia. As regards Κεράων and Μάττων, I venture this explanation: the guild of cooks, like other guilds and like clans of kinsmen, would be tempted to invent for themselves an eponymous ancestor; so fictitious heroes arise, whose names stamp them as the patron-saints of the arts of cooking. We can similarly explain Κέραμος as the eponymous hero of the potters' guild, who gave his name to a deme of the Akamantid tribe. Nor must we take these fictions too seriously.

Ἀμφίδρομος we may regard as a pure literary invention, created to explain the Ἀμφιδρόμια, as Ἔρση has been supposed to have been evolved to explain the Ἑρσηφόρια. The δαίμων ἐπιδώτης of Sparta, a vague figure with a semi-functional name, certainly seems to answer somewhat to the description of a true Sonder-Gott; but the record of Pausanias suggests that his title is of late creation. The δαίμων Σπουδαίων on the Acropolis at Athens may be regarded as another form of the Ἀγαθὸς Δαίμων, a late growth of the polytheistic period. As regards such personages as Βλαύτη, Ἥρως Ἐπιτέγιος, we have no clue at all as to their character, period, or *raison d'être*. More interesting are the figures of Εὔνοστος at Tanagra and Ἐχετλαῖος at Marathon, popular local heroes of the field and crops, to whom certain vivid legends are attached that place them on a different plane from the shadowy figures of the Indigitamenta. The Marathonian tradition is well known; it is probably a pseudo-historic aetiological story invented to explain a name and a half-forgotten cult, and should not be regarded as proof that the latter originated in the fifth century B.C. We have still more reason to believe that the Tanagran Eunostos belonged to a very early period of European belief, and the study of his legend and the names associated with it reveals an old-world agricultural story and ritual. Eunostos is the power that gives 'a good return' to the crops[1]; and, if we may trust the Etymologicum Magnum, he had a sister Εὔνοστος, a mill-goddess, who looked after the measure of the barley, and whose image stood in the mills. Plutarch tells us that the holy grove of the Tanagran hero was strictly guarded against the intrusion of women. We know this to have been a taboo enforced in many ancient shrines; but Plutarch,

[1] Cf. the use of νόστος in Athenae—618 C.

drawing from a book by Diocles περὶ τῶν ἡρώων and ultimately from the Boeotian poetess Myrtis, gives a curious story to explain the fact. A maiden of the country woos the virtuous Eunostos in vain, and thereupon hangs herself in grief. To requite her death one of her brothers slays Eunostos, whose ghost then becomes a scourge to the territory until he is pacified with cult and a shrine where no women might enter. The rule was once infringed, with the result of earthquakes, famine, and other prodigies, and Eunostos was seen hastening to the sea to cleanse himself from the pollution. This genial tale of despised love doubtless arose out of a quaint agricultural or horticultural ritual. Eunostos is the hero of the cornfield, who is slain like John Barleycorn is slain. His parents are Ἐλιεύς of the marshes and Σκιάς of the shade; the wicked brother is Βουκόλος; the hapless maiden is Ὄχνα, the 'Pear-tree', and these hanging-stories of personages, whose names or legends convey an allusion to the fertility of the trees and the crops, arose, as I have pointed out before, from the old agrarian ritual of hanging images on trees. We may then regard Eunostos and Echetlaios, possibly also Ἐρεχθεύς, 'the ground-breaker', as descendants or survivals of a very old stratum of European agricultural religion, when the personages of worship were simpler in their structure and less individualized than the high gods of Greece; yet as we know them these Greek heroes of the field and the tree are of the same concrete life as that which quickened the forms of Hermes and Dionysos. Going back as far as we can, we have not yet found among them the shadowy impalpable forms that seem to float before us in the Indigitamenta. Κναμίτης, the bean-hero, whose shrine stood on the sacred way, may have had the same descent and character as Εὔνοστος; or he may be a late product, a personage who grew up artificially within the area of the Demeter-cult, at a time when the passion for hero-worship had reached the pitch that it had attained in the seventh and sixth centuries, and culture-heroes were needed for many departments of life; he may also have been called into existence because the culture of beans could not be imputed to Demeter, who happened to loathe them. Telesidromos, the hero of the Eleusinian racecourse, is obviously a late and transparent fiction, and we may believe the same of Εὔδρομος of Delphi. Again, we must reckon with the possibility that the theory of Euhemeros may occasionally have been true. The worship of real people of flesh and blood is a living force, as Sir Alfred Lyall has emphatically pointed out, in India and China to this day. He

records the case of the very real Indian, Hurdeo Lala, becoming after his death the 'functional' god of cholera.[1] It would be quite natural, from the Greek point of view, that when an individual was deified or 'heroized' after his death a new and functional name should be then attached to him, expressive of the benign influence which he was called upon to exert in behalf of his worshippers. This would explain such family cults as those of Epimachos at Knidos and Erythrai, and of Symmachos at Pharsalos. That these are the cults of real men is certain in the latter[2] case and probable in the former. Similarly, the cult of the Ἥρως Στρατηγός at Athens, of which we have proof in the first century B.C., may well have been the cult of a real historical personage whose name was concealed and lost. The Ἥρωες Ἰατροί in different parts of Attica may with perfectly good reason be supposed to have been real men, who had an existence apart from their 'function', or at least ancestors imagined and worshipped as real, who take over the art of healing, as every 'hero' always could if he wished. And of two of these glorified Ἰατροί personal names are actually recorded. The ἥρως κατὰ πρύμναν at Phaleron need not originally have been the functional demon-impersonation of steering, but a buried and sacred personage whose name was lost, and who was believed to have been the steersman of Theseus, and thus came to be an occasional patron-saint of mariners. Greece was full of forgotten graves belonging to an immemorial past. Many were believed to be, and very likely were, the resting-places of ancestral chiefs, and cults consecrated to them may often have arisen or been revived after the name had been forgotten. We know that tombs were frequently near or within the precincts of temples, and from this local accident the buried ancestor might acquire a new descriptive name, such as Κλαϊκοφόρος, the 'porter of the temple'. A clear instance of an apparently functional cult which may be thus explained, and to which Dr. Usener's theory can be proved inappropriate, was that of the hero Ταράξιππος at Olympia and on the Isthmos. Near the entrance to the racecourse at Olympia was an altar which appears to have been erected over a grave, where

[1] *Asiatic Studies*, 2nd ser., p. 287.

[2] *B.C.H.*, 12, p. 184. On a relief found at Pharsalos, of the fourth century B.C., Symmachos is seen standing by his horse, and his type is common for that of the 'heroized' dead; near him is a seated goddess, whom the remains of letters prove to be Hestia. As the writer of the article points out, this is a unique instance of the figure of Hestia being used as the divine symbol of a family cult.

we may suppose that some one had been really buried, and at this place horses habitually shied. What was more natural than to account for their fear by supposing the ghost to be the cause of it? It was most important, then, to know the name of that ghost, but though various theories as to his personal name were put forward, none could prevail, and the most reasonable course was adopted of calling him Ταράξιππος. As the institution of the races at Olympia is comparatively late, Ταράξιππος at least is not a remnant of a prehistoric religion.

Again, there are other appellatives in this list that we may quite reasonably explain as the sheddings and leavings of concrete high divinities, Ἐρίβοια, for instance, in Lesbos, being very probably an epithet of Demeter, Εὐβοσία or Εὐποσία in Phrygia of Agrippina-Demeter. And what are we to say of Ἰσοδαίτης? We can understand the creation or evolution of a 'daimon of the banquet', but the 'daimon of the equal banquet' seems a somewhat stranger fiction. The record in Harpokration gives us a clue to a different explanation. We are told that he was a ξενικὸς Δαίμων at Athens, who was worshipped by women of doubtful character. Now, there were certain foreign cults of Dionysos, mystic and disreputable, that were in vogue at Athens from the fifth century onwards, and were specially attractive to women, and Plutarch tells us that in mystic circles Dionysos was called Ἰσοδαίτης.

More important are the cults of Καλλιγένεια and Κουροτρόφος, both of whom are 'Sonder-Gottheiten' in Dr. Usener's list. Καλλιγένεια may be interpreted as the goddess of fair offspring, or as she who gives fair offspring. The ancient writers, both learned and popular, were doubtful about her, but all associated her with Demeter; and it is in the company of this goddess that we meet with her both at Athens and in Sicily. The name must be considered in close relation to the ritual of the Καλλιγένεια, which took place in the great festival of Demeter, the Thesmophoria, on the day after the Νηστεία. Wherever the Thesmophoria was held in Greece, the Καλλιγένεια must have usually formed part of it, for Plutarch specially notes its non-existence at Eretria. It is a legitimate conjecture that on this day the goddess was believed to have been reunited with Kore, and that the women then prayed for fair offspring to the goddess of fair offspring, the Θεσμοφόρια being specially a festival of married women. But Kalligeneia herself was almost certainly a later fiction like Amphidromos, an imaginary personality invented to explain the

name of the festival-day, *τὰ Καλλιγένεια*.[1] As regards *Κουροτρόφος* at Athens, we cannot be sure that she did not once possess a more concrete proper name. Many goddesses were called by this adjective, and the type of a female divinity holding a child in her arms, or giving suck to it, was widely spread over the Mediterranean at a very early time, and it has recently been discovered that Aphaia in Aegina was thus represented. The very multiplicity of the proper names that might claim the epithet might be a reason for a cautious cult preferring to use the epithet alone. But in any case the *Κουροτρόφος* at Athens was a robust and personal figure closely akin to the earth goddess, and whether the earth-mother is called Ge or *Κουροτρόφος*, or *Πανδώρα*, the conception may be equally anthropomorphic and personal in each case, and this is really the important fact to bear in view.

I have reserved for the close of this short critical account the consideration of *Μυίαγρος*, the Fly-Catcher, at Aliphera; for Dr. Usener's theory might really make more out of this humble personage than out of any of his *confrères*. The facts that illustrate the cult are interesting. At Leukas and Actium they sacrificed to the flies before the great ritual in honour of Apollo began. This was perhaps the simplest and most primitive thing to do; it does not imply fly-worship, but the preliminary offering to them of a piece of cooked meat was a bribe to the flies to go away and not disturb the worshippers at the solemn function that was to follow, where any disturbance would be ill-omened, and where the flies were likely, unless pacified first, to be attracted by the savour of the burnt-sacrifice. As thought advances, a hero, *Μυίαγρος*, is evolved at Aliphera, to look after the flies before the sacrifice to Athena. We have traces of the same hero at Olympia, though here his function was at last absorbed by Zeus *Ἀπόμυιος*. Here then in *Μυίαγρος* is almost the true Sonder-Gott, almost the 'Augenblick-Gott'; for his function is very limited, and his value for the worshipper was probably little more than momentary, nor are any stories told about him. Yet he is a late invention, implying the pre-existence of the higher gods, for whose better ministration he was created and ordained. Likewise he is called a *ἥρως* by Pausanias, and therefore by him at least regarded as personal.

It seems, then, that scarcely any figure in this brief catalogue entirely satisfies Dr. Usener's definition of a Sonder-Gott; those that

[1] Vide my *Cults*, vol. iii, pp. 95–6.

may be supposed to have descended from a remote past yet possess a personal character which betrays the same religious thought as that which produced the personal gods of polytheism. Many of the figures imply the high gods, and some are probably emanations from them. The more shadowy and impalpable forms can be sometimes proved, and often suspected, to be the products of the latest period. The ancestor of a personal deity may be often more limited in function, but appears sometimes to be more complex than his descendant. An adjectival name may have been originally chosen to designate the Godhead; the name 'Christ' was adjectival, and originally 'Zeus' may have only signified 'the Bright One'. But such names may in thought have been connected with many other qualities that make up personality, and may have at once denoted full concrete individuals. Doubtless a divine individuality often grows in the course of time more complex and more intensely conceived, and sometimes we can mark the stages of its growth. But Dr. Usener's learned and, in many respects, valuable treatise has not proved, or even made probable, its theorem that in the immediate background of Greek polytheism, out of which much of it developed, was a shadowy world of functional, half-impersonal 'numina'. Greek religion early and late had always its animistic and daemonistic elements; and in the history of our race animism probably preceded theism and polytheism; but our present knowledge points to the belief that the ancestors of the historic Greeks brought with them a personal religion of concrete divinities, and found a personal polytheism in many respects differing from their own, but in other ways akin, on the soil that they conquered.

FOLK-LORE IN THE OLD TESTAMENT

By J. G. FRAZER

It is now generally admitted that the ancient Hebrews did not attain to the high-water mark of their religion and morality at a single bound. Like every other people they passed through a long period of development before they reached those lofty conceptions of the divine nature and its relation to man which are the glory of Israel. The rising tide, if I may pursue the metaphor, did not flow onward with one broad unwavering sweep; it had many backward eddies, many of those retrograde movements which in the language of the Bible are familiar to us as backslidings. So the great rollers break in thunder on a pebbly beach and then retire with a griding sound of pebbles which the retreating water sucks back with it into the sea. At such times we often doubt whether the tide is flowing or ebbing. So it must often have been with those who lived through some of the great epochs in the history of Israel. They also must have had many misgivings as to whether the movement of thought and conduct was on the whole forward or backward, whether the changes they witnessed would in the end prove for good or evil. The writings of the Hebrew prophets are full of these doubts and anxieties. They reflect a state of mind that seems to tremble on a knife-edge, to oscillate between hope and despair. From the brightest visions of future glory and bliss we plunge suddenly into the gloomiest forecasts of coming disaster and woe. It would be a great injustice to the prophets to imagine that these dark forebodings were nothing but the gigantic shadows of Assyria, Babylon, and Egypt cast athwart the little land of Palestine, nothing but fearful anticipations of lost battles and national ruin. The prophets were patriots certainly, but they were much more. They were ethical teachers who viewed with burning indignation the base and cruel superstitions to which many, if not most, of their countrymen were slaves. To the best minds of Israel that moral bondage was worse than any merely political servitude could ever have been. So they never wearied of denouncing it in language

which by its fervour and insistence affords us some measure of the depth and extent of the evil that drew forth such fierce invectives.

In point of fact we learn from the prophetic writings as well as from the historical books that a mass of paganism, and a very gross paganism too, survived in Israel down practically to the close of the monarchy. The last great reformation of Jewish religion took place under King Josiah less than forty years before the capture of Jerusalem and the final destruction of the national independence; and down to that time, as we know from the Book of Kings, some of the worst rites of heathendom were practised at Jerusalem and even tolerated in the temple itself.[1] Thus we have evidence, abundant evidence, in the Old Testament that heathen superstitions persisted among the Jews to a late era. Such relics of barbarism we are accustomed to call survivals, because they have survived from rude ages into a period of higher culture despite all the humanizing and enlightening influences that have been at work. It is with a few of these survivals of ancient Semitic paganism that I propose to deal in this paper. At the outset it may be well to remind the reader that all such legacies of the past are not equally worthy of condemnation. Many of them are mere harmless absurdities, or, if they have not always been so, they have become so in the course of time, which has gently stripped them of their harsher features, leaving behind what is innocent and sometimes picturesque. These quaint survivals are what we commonly mean by folk-lore; and accordingly it is of some folk-lore elements in the Old Testament that I am about to write. I shall barely touch in passing on the darker and sadder side of Semitic heathendom.

§ 1. *The Mark of Cain.*

We read in Genesis that when Cain had murdered his brother Abel he was driven out from society to be a fugitive and vagabond on earth. Fearing to be slain by any one who might meet him, he remonstrated with God on the hardness of his lot, and God had so far compassion on him that he 'set a mark upon Cain, lest any man finding him should kill him'.[2] What was the mark that God put on the first murderer? or the sign that he appointed for him?

[1] 2 Kings xxiii. 4–24.

[2] Genesis iv. 8–15 (Authorized Version). The Revised Version renders: 'and the Lord appointed a sign for Cain.' The most literal translation would be, 'set a sign to (or for) Cain.'

That we have here a reminiscence of some old custom observed by manslayers is highly probable; and, though we cannot hope to ascertain what the actual mark or sign was, a comparison of the customs observed by manslayers in other parts of the world may help us to understand at least its general significance. Robertson Smith thought that the mark in question was the tribal mark, a badge which every member of the tribe wore on his person, and which served to protect him by indicating that he belonged to a community that would avenge his murder.[1] Certainly such marks are common among savages. For example, among the Bedouins of to-day one of the chief tribal badges is the mode of wearing the hair.[2] In many parts of the world, notably in Africa, the tribal mark consists of a pattern tattooed or incised on some part of the person.[3] That such marks might serve as a protection to the tribesman in the way supposed by Robertson Smith seems probable; though on the other hand it is to be remembered that in a hostile country they would, on the contrary, increase his danger by advertising him as an enemy.

But even if we concede the protective value of a tribal mark, still the explanation thus offered of the mark of Cain seems hardly to fit the case. It is too general. Every member of a tribe was equally protected by such a mark, whether he was a manslayer or not. The whole drift of the narrative tends to show that the mark in question was not worn by every member of the community, but was peculiar to a murderer. Accordingly we seem driven to seek for an explanation in another direction.

From the narrative itself we gather that Cain was supposed to be obnoxious to other dangers than that of being slain as an outlaw by any one who met him. God is represented saying to him: 'What hast thou done? the voice of thy brother's blood crieth unto me from the ground. And now cursed art thou from the ground, which hath opened her mouth to receive thy brother's blood from thy hand; when thou tillest the ground it shall not henceforth yield unto thee

[1] W. Robertson Smith, *Kinship and Marriage in Early Arabia*[2], p. 251.

[2] W. Robertson Smith, *loc. cit.*

[3] J. G. Frazer, *Totemism*, pp. 28 sq. The evidence there adduced might be indefinitely multiplied, especially for Africa. In the work to which I have referred I was mistaken in attempting to connect tribal marks with totemism. Probably such marks are seldom or never totemic, since they are common to all members of a tribe; whereas a totemic mark would be confined to one particular subdivision (clan or *gens*) of the tribe.

her strength; a fugitive and a wanderer shalt thou be in the earth.'[1] Here it is obvious that the blood of his murdered brother is regarded as constituting a physical danger to the murderer; it taints the ground and prevents it from yielding its increase. Thus the murderer is thought to have poisoned the sources of life and thereby endangered the supply of food for himself, and perhaps for others. On this view it is intelligible that a homicide should be shunned and banished the country, to which his presence is a continual menace. He is plague-stricken, surrounded by a poisonous atmosphere, infected by a contagion of death; his very touch may blight the earth. Hence we can understand a certain rule of Attic law. A homicide who had been banished, and against whom in his absence a second charge had been brought, was allowed to return to Attica to plead in his defence, but he might not set foot on the land, he had to speak from a ship, and even the ship might not cast anchor or put out a gangway. The judges avoided all contact with the culprit, for they judged the case sitting or standing on the shore.[2] Clearly the intention of this rule of law was to put the manslayer in quarantine, lest by touching Attic earth even indirectly through the anchor or the gangway he should blast it. For the same reason, if such a man, sailing the sea, had the misfortune to be cast away on the country where his crime had been perpetrated, he was allowed indeed to camp on the shore till a ship came to take him off, but he was expected to keep his feet in the sea-water all the time[3]; evidently in order to counteract, or at least dilute, the poison which he was supposed to instil into the soil.

Thus a mark put on a homicide might be intended primarily not for his protection, but for the protection of the persons who met him; it might be a danger signal to warn them off. If it was so, it would serve at the same time indirectly to keep him scathless.

[1] Genesis iv. 10–12 (Revised Version).

[2] Demosthenes, xxiii. 77 sq., pp. 645 sq.; Aristotle, *Constitution of Athens*, 57; Pausanias, i. 28. 11; Pollux, viii. 120; Helladius, quoted by Photius, *Bibliotheca*, p. 535 a, lines 28 sqq., ed. I. Bekker. The rule which forbade the ship to cast anchor or to put out a gangway is mentioned only by Pollux. But Pollux had access to excellent authorities, and the rule bears the stamp of genuine antiquity. We may therefore safely dismiss as unauthorized the statement of Helladius that the ship cast anchor.

[3] Plato, *Laws*, ix. 8, p. 866 cd. In ancient Greece, for a different reason, when a man died of dropsy, his children were made to sit with their feet in water until the body was burned (Plutarch, *De sera numinis vindicta*, 14). See my *Lectures on the Early History of the Kingship*, p. 47.

However, a closer examination of the danger which clung like a plague to the manslayer may lead us to a different interpretation of the murderer's mark. Here again, as in the customs just mentioned, we seem to touch the bed-rock of superstition in Attica. Plato tells us that according to a very ancient Greek belief the ghost of a man who had just been killed was angry with his slayer and troubled him, being enraged at the sight of the homicide going about in his old familiar haunts; hence it was needful for the manslayer to depart from his country for a year until the wrath of the ghost had cooled down, nor might he return till sacrifices had been offered and ceremonies of purification performed. If the victim chanced to be a foreigner, the homicide had to shun the native land of the dead man as well as his own, and in going into banishment he had to follow a prescribed road[1], for clearly it would never do to let him rove about the country with the angry ghost at his heels. Among the Yaos and perhaps other tribes of British Central Africa 'the man who kills his own slave, or even his younger brother or other ward, is not amenable to justice, but—unless he can protect himself by a charm—he is afraid of the mysterious *chirope* which overtakes those who shed blood within the tribe. The chief, to whom he goes if he has committed such a murder, procures the charm for him from his own medicine-man, and uses it himself as well, "because of the blood that has been shed in his land."'[2] The mysterious *chirope* which thus overtakes a man who has shed blood within the tribe is explained to be either an illness or a sort of madness which comes over him, as it is said to have come over Orestes after the murder of his mother[3], until he has performed an expiatory ceremony; and 'the idea is that the spirit of the slain enters into the body of the slayer'. When the homicide has used the charm provided by the chief, which may be either drunk or administered in a bath, the danger passes away.[4]

This fear of the wrathful ghost of the slain is probably at the root of many ancient customs observed in connexion with homicide; it may well have been one of the principal motives for inflicting capital punishment on murderers. For if such persons

[1] Plato, *Laws*, ix. 8, pp. 865 d-866 a; Demosthenes, xxiii. pp. 643 sq.; Hesychius, s. v. ἀπενιαυτισμός.

[2] A. Werner, *The Natives of British Central Africa* (London, 1906), p. 265.

[3] Pausanias, viii. 34. 1-4.

[4] A. Werner, *op. cit.*, pp. 67 sq.; Duff Macdonald, *Africana*, i. 168.

are dogged by a powerful and angry spirit which makes them a danger to their fellows, society can obviously protect itself very simply by sacrificing the murderer to the ghost, in other words by putting him to death. But then it becomes necessary to guard the executioners in their turn against the ghosts of their victims, and this has been done, for example, by West African negroes[1] and some Indians of Brazil. Among the latter people a man who had publicly executed a prisoner had to fast and lie in his hammock for three days, without setting foot on the ground; further, he had to make incisions in his breast, arms, and other parts of his body, and a black powder was rubbed into the wounds which left ineffaceable scars so artistically arranged that they presented the appearance of a tight-fitting garment. It was believed that he would die if he did not observe these rules and draw blood from his own body after slaughtering the captive.[2] The fear of his victim's ghost is not indeed mentioned by our authorities as the motive for practising these customs. But that it was the real motive is not only suggested by the analogy of the West African customs, but is practically proved by a custom which these same Brazilian Indians observed before the execution. They formally invited the doomed man to avenge his death, and for this purpose they supplied him with stones or potsherds, which he hurled at his guards, while they protected themselves against the missiles with

[1] G. Loyer, in Astley's *Voyages and Travels*, ii. 444; Father Baudin, 'Féticheurs ou ministres religieux des Nègres de la Guinée,' *Missions Catholiques*, xvi. (1884), p. 332; Major A. G. Leonard, *The lower Niger and its Tribes* (London, 1906), p. 180. According to Loyer the executioners are reckoned impure for three days after an execution, and build a separate hut for themselves at a distance from the village. There they live in seclusion for three days, after which they take the hut to pieces, leaving not so much as the ashes of their fire. Then 'the first executioner, having a pot on his head, leads them to the place where the criminal suffered. There they all call him thrice by his name. The first executioner breaks his pot, and, leaving their old rags and bundles, they all scamper home.' According to Father Baudin, the executioner at Porto Novo, on the coast of Guinea, used to decorate his walls with the jawbones of his victims to prevent their ghosts from troubling him at night.

[2] F. A. Thevet, *Les singularitez de la France Antarctique, autrement nommée Amerique* (Antwerp, 1558), p. 76; *id.*, *Cosmographie Universelle* (Paris, 1575), p. 946 [980]; P. de Magalhanes de Gandavo, *Histoire de la province de Sancta-Cruz* (Paris, 1837), pp. 138 sq.; *The Captivity of Hans Stade of Hesse* (London, Hakluyt Society, 1874), p. 159; J. Lery, *Historia navigationis in Brasiliam quae et America dicitur* (1586), p. 192; R. Southey, *History of Brazil*, i.[2] 232.

shields made of hide.[1] The form of the invitation, which ran thus, 'Avenge your death before your decease', clearly implies a hope that if the man had thus satisfied his thirst for vengeance in his lifetime his ghost would not trouble them after death. But to make assurance doubly sure the executioner secluded himself and observed the curious precautions which I have described. The drawing of blood from his own body, which was regarded as essential to the preservation of his life[2], may have been intended to satisfy the ghost's demand of blood for blood, while the permanent marks left on the slayer's body would be a standing evidence that he had given satisfaction to his victim. Could any reasonable ghost ask for more?

This interpretation of the marks on the executioner's body is confirmed by the following custom. Among the natives of New Guinea, particularly near Finsch Harbour on the north-east coast, the kinsmen of a murdered man who have accepted a blood-wit instead of avenging his death take care to be marked with chalk on the forehead by the relatives of the murderer, 'lest the ghost should trouble them for failing to avenge his death and should carry off their pigs or make their teeth loose.'[3] In this custom it is not the murderer but the kinsmen of his victim who are marked, but the principle is the same. The ghost of the murdered man naturally turns in fury on his unkind relatives who have not exacted blood for his blood. But just as he is about to swoop down on them to loosen their teeth, or steal their pigs, or make himself unpleasant in other ways, he is brought up short by the sight of the white mark on their black or coffee-coloured brows. It is the receipt for the payment in full of the blood-wit: it has been literally chalked up there by his own kinsmen: he cannot truthfully deny their signature: he is balked, and turns away disappointed. The same mark might obviously be made for the same reason on the murderer's brow to prove that he had paid in cash, or whatever may be the local equivalent of cash, for the deed he had done, and that the ghost therefore had no further claim on him. Was the mark of Cain a mark of this sort? Was it a proof that he had paid the blood-wit? Was it a receipt for cash down?

It may have been so, but there is still another possibility to

[1] J. Lery, *op. cit.*, p. 185.

[2] P. de Magalhanes de Gandavo, *op. cit.*, p. 139.

[3] B. Hagen, *Unter den Papuas* (Wiesbaden, 1899), p. 254.

be considered. On the theory which I have just indicated it is obvious that the mark of Cain could only be put on a homicide when his victim was a man of the same tribe or community as himself, since it is only to men of the same tribe or community that compensation for homicide is paid. But the ghosts of slain enemies are certainly not less dreaded than the ghosts of slain friends; and if you cannot pacify them with a sum of money paid to their kinsfolk, what are you to do with them? Many plans have been adopted for the protection of warriors against the spirits of the men whom they have sent out of the world before their due time. Apparently one of these precautions is to disguise the slayer so that the ghost may not recognize him; another is to render his person in some way so formidable or so offensive that the spirit will not meddle with him. One or other of these motives may explain the following customs, which I select from a large number of similar cases.

Among the Ba-Yaka, a Bantu people of the Congo Free State, 'a man who has been killed in battle is supposed to send his soul to avenge his death on the person of the man who killed him; the latter, however, can escape the vengeance of the dead by wearing the red tail-feathers of the parrot in his hair, and painting his forehead red.'[1] Among the Thompson Indians of British Columbia it used to be customary for men who had slain enemies to blacken their faces. If this precaution were neglected it was believed that the spirits of their victims would blind them.[2] Among the Angoni, a Zulu tribe settled to the north of the Zambesi, warriors who have killed foes on an expedition smear their bodies and faces with ashes, hang garments of their victims on their persons, and tie ropes round their necks, so that the ends hang down over their shoulders or breasts. This costume they wear for three days after their return, and rising at break of day they run through the village uttering frightful yells to drive away the ghosts of the slain, which, if they were not thus banished, might bring sickness and misfortune on the inhabitants.[3] Among the Bantu tribes of Kavi-

[1] E. Torday and T. A. Joyce, 'Notes on the Ethnography of the Ba-Yaka,' *Journal of the Anthropological Institute*, xxxvi (1906), pp. 50 sq.

[2] J. Teit, 'The Thompson Indians of British Columbia,' *Memoirs of the American Museum of Natural History*, vol. ii. *Anthropology*, i. [Part] iv. ([New York,] April, 1900), p. 357.

[3] C. Wiese, 'Beiträge zur Geschichte der Zulu im Norden des Zambesi,' *Zeitschrift für Ethnologie*, xxxii (1900), pp. 197 sq.

rondo, in eastern Africa, when a man has killed an enemy in warfare he shaves his head on his return home, and his friends rub a medicine, which generally consists of goat's dung, over his body to prevent the spirit of the slain man from troubling him.[1] With the Ja-Luo of Kavirondo the custom is somewhat different. Three days after his return from the fight the warrior shaves his head. But before he may enter his village he has to hang a live fowl, head uppermost, round his neck; then the bird is decapitated and its head left hanging on his body. Soon after his return a feast is made for the slain man, in order that his ghost may not haunt his slayer.[2] In Fiji any one who had clubbed a human being to death in war was consecrated or tabooed. He was smeared red by the king with turmeric from the roots of his hair to his heels. A hut was built and in it he had to pass the next three nights, during which he might not lie down, but must sleep as he sat. Till the three nights had elapsed he might not change his garment, nor remove the turmeric, nor enter a house in which there was a woman.[3] That these rules were intended to protect the Fijian warrior from his victim's ghost is strongly suggested, if not proved, by another Fijian custom. When these savages had buried a man alive, as they often did, they used at nightfall to make a great uproar by means of bamboos, trumpet-shells, and so forth, for the purpose of frightening away his ghost, lest he should attempt to return to his old home. And to render his house unattractive to him they dismantled it and clothed it with everything that to their ideas seemed most repulsive.[4] So the North American Indians used to run through the village with hideous yells, beating on the furniture, walls, and roofs of the huts to drive away the angry ghost of an enemy whom they had just tortured to death.[5] A similar custom is still observed in various parts of New Guinea.[6]

[1] Sir H. Johnston, *The Uganda Protectorate* (London, 1902), ii. 743 sq.; C. W. Hobley, *Eastern Uganda* (London, 1902), p. 20.

[2] Sir H. Johnston, *op. cit.*, ii. 794; C. W. Hobley, *op. cit.*, p. 31.

[3] T. Williams, *Fiji and the Fijians*[2], i. 55 sq.

[4] J. E. Erskine, *The Western Pacific*, p. 477.

[5] Charlevoix, *Histoire de la Nouvelle France*, vi. 77, 122 sq.; J. F. Lafitau, *Moeurs des Sauvages Ameriquains*, ii. 279.

[6] R. E. Guise, in *Journal of the Anthropological Institute*, xxviii (1899), pp. 213 sq.; J. L. D. van der Roest, in *Tijdschrift voor Indische Taal-, Land- en Volkenkunde*, xl (1898), pp. 157 sq.; H. von Rosenberg, *Der malayische Archipel*, p. 461; K. Vetter in *Nachrichten über Kaiser Wilhelms-Land und den Bismarck-Archipel*, 1897, p. 94.

Thus the mark of Cain may have been a mode of disguising a homicide or of rendering him so repulsive or formidable in appearance that his victim's ghosts would either not know him or at least give him a wide berth. Elsewhere I have conjectured that mourning costume in general was originally a disguise adopted to protect the surviving relatives from the dreaded ghost of the recently departed.[1] Whether that be so or not, it is certain that the living do sometimes disguise themselves to escape the notice of the dead. Thus in the western districts of Timor, a large island of the Indian Archipelago, before the body of a man is coffined, his wives stand weeping over him, and their village gossips must also be present 'all with loosened hair in order to make themselves unrecognizable by the *nitu* (spirit) of the dead.'[2] Again, among the Herero of South Africa, when a man is dying he will sometimes say to a person whom he does not like, 'Whence do you come? I do not wish to see you here,' and so saying he presses the fingers of his left hand together in such a way that the tip of the thumb protrudes between the fingers. 'The person spoken to now knows that the other has decided upon taking him away (*okutuaerera*) after his death, which means that he must die. In many cases, however, he can avoid this threatening danger of death. For this purpose, he hastily leaves the place of the dying man and looks for an *onganga* (i. e. "doctor, magician"), in order to have himself undressed, washed, and greased again, and dressed with other clothes. He is now quite at ease about the threatening of death caused by the deceased; for, says he, "Now our father does not know me."'[3] In like manner we may suppose that when Cain had been marked by God he felt quite easy in his mind, believing that the ghost of his murdered brother would no longer recognize and molest him.

§ 2. *Sacred oaks and terebinths.*

Among the sacred trees of the ancient Hebrews the oak and the terebinth seem to have held a foremost place. Both trees are still common in Palestine. Thus, for example, speaking of the Plain

[1] *Journal of the Anthropological Institute*, xv (1886), p. 73.

[2] J. G. F. Riedel, 'Die Landschaft Dawan oder West-Timor,' *Deutsche Geographische Blätter*, x. 286.

[3] The Rev. G. Viehe, 'Some customs of the Ovaherero,' (*South African*) *Folk-lore Journal*, i (1879), pp. 51 sq.

of Sharon which is interposed between the inhospitable sandy shore of the Mediterranean and the hills of Samaria, Thomson says: 'The sandy downs, with their pine bushes, are falling back towards the sea, giving place to a firmer soil, upon which stand here and there venerable oak trees, like patriarchs of by-gone generations left alone in the wilderness. They are the beginning of the largest and most impressive oak forest in western Palestine. It extends northwards to the eastern base of Carmel, and, with slight interruptions, it continues along the western slopes of Galilee quite to the lofty Jermŭk, west of Safet. I have spent many days in wandering through those vast oak glades. The scenery is becoming quite park-like and very pretty. The trees are all of one kind, and apparently very old. The Arabic name for this species of oak is *sindiân*—a large evergreen tree whose botanical name is *quercus pseudo-coccifera*.[1] There are other varieties of the oak interspersed occasionally with these, but the prevailing tree everywhere is the noble, venerable, and solemn *sindiân*. . . . On one occasion I spent a night, for the sake of protection, at a village a few miles north-east of these mills called Sindiâneh—the name no doubt derived from the oak woods which surround it. I had a delightful ramble early the next morning in those grand old forests, and then understood perfectly how Absalom could be caught by the thick branches of an oak. The strong arms of these trees spread out so near the ground that one cannot walk erect beneath them; and on a frightened mule such a head of hair as that vain but wicked son polled every year would certainly become inextricably entangled.'[2] In antiquity these woods of Sharon were known as the Forest or the Oak Forest, and they are the Enchanted Forest of Tasso.[3] Again, in speaking of the Wady 'Abilîn on the confines of Zebulun and Asher, Thomson says: 'It is conducting us through a grand avenue of magnificent oaks, whose grateful shade is refreshing to the weary

[1] Amongst the many species of oaks found in Palestine 'this variety is the most common, and sometimes attains a magnificent growth, as the oak of Libbeya in Galilee' (H. B. Tristram, *The Fauna and Flora of Palestine*, p. 412). Compare *id.*, *The Natural History of the* Bible[9], pp. 368 sq. As to the oak of Libbeya, see below, p. 112.

[2] W. M. Thomson, *The Land and the Book, Southern Palestine and Jerusalem* (London, 1881), pp. 60 sq.; compare p. 79.

[3] G. A. Smith, *The Historical Geography of the Holy Land* (London, 1894), pp. 147 sq.

traveller. They are part of an extensive forest which covers most of the hills southward to the plain of Esdraelon. There is hardly a more agreeable ride in the country than through this noble oak wood from Shefa 'Omar to Seffûrieh. Many of the trees are very large, and by their great age indicate that this region was not cultivated.'[1] Again, the romantic scenery of Banias, where the Jordan bursts full-born from the foot of Mount Hermon, owes much of its charm to forests and clumps of grand oaks.[2] Canon Tristram describes an evergreen oak at the village of Libbeya in this neighbourhood as the most magnificent tree he ever remembered to have seen. At a little distance he and his friends could hardly believe that it was a single tree.[3]

Passing now to the east of the Jordan we are told of Ard el Bathanyeh, the ancient Batanea, that 'the whole of the province is exceedingly picturesque. The mountains are well wooded with forests of evergreen oaks, and the sides terraced.'[4] Again, speaking of the Decapolis, Thomson writes: 'We have been following along the remains of a Roman road, and now we are entering a beautiful forest of evergreen oaks which seems to extend a great distance over the range of Jebel Haurân. Kûnawât itself is surrounded by it, and many of the ruins are embowered beneath wide-spreading *sindiân* trees, as these scrub-oaks are called by the natives, and here and there some of the columns are seen rising above the dense foliage'[5]; and further on he writes: 'The country between our line of travel and the valley of the Jordan northward and westward is wild and mountainous, and in some parts it is well wooded with noble oak forests. It is the region of the ancient

[1] W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, p. 302. As to this oak-forest see further H. B. Tristram, *The Land of Israel*[3], pp. 112, 116, 121. However, since Thomson wrote, the destruction of the forests of western Palestine would seem to have proceeded apace. See H. B. Tristram, *The Natural History of the Bible*[9], p. 7.

[2] W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, pp. 440, 464, 467, 469, 470, 473, 481, 484, 485, 494; H. B. Tristram, *The Land of Israel*[3], pp. 572, 573, 577, 578.

[3] H. B. Tristram, *op. cit.*, pp. 594 sq. The lower trunk of the tree measured thirty-seven feet in circumference at the narrowest part.

[4] Dr. Porter, quoted by W. M. Thomson, *The Land and the Book, Lebanon, Damascus, and beyond Jordan*, p. 441.

[5] W. M. Thomson, *The Land and the Book, Lebanon, Damascus, and beyond Jordan*, p. 481; compare pp. 494, 497.

Decapolis.'[1] 'In Gilead, we come to a more densely-wooded region, a true forest in places, the tops of the higher ranges covered with noble pines; then a zone of evergreen oaks, with arbutus, myrtle, and other shrubs intermixed; lower down the deciduous oak is the predominant tree.'[2] Of these beautiful woods of Gilead, where the famous balm was obtained, Thomson says: 'We have now reached the regular road from el Husn to Sûf and Jerash, and will have the shade of this noble forest of oak, pine, and other trees for the rest of the ride. There is not a breath of air in these thick woods, and the heat is most oppressive both to ourselves and our weary animals. . . . Up to this point—an hour and a half from el Husn—much of the country is cultivated, but from this on to Sûf the forest is uninterrupted, and is composed mostly of evergreen oaks, interspersed occasionally with pines, terebinths, and hawthorn. . . . From Um el Khanzîr to Sûf is nearly two hours, and in spring nothing can be more delightful than a ride through these forests, the grandest in this land of Gilead; and we need not wonder at the encomiums lavished by all travellers that have passed this way on the beautiful woodland scenery of these regions, for even the most enthusiastic have not said enough in its praise.'[3] 'After leaving the olive groves of Sûf we shall be overshadowed by an uninterrupted forest of venerable oak and other evergreen trees for more than an hour to 'Ain-Jenneh. . . . These forests extend a great distance to the north and south, and a large part of the country might be brought under cultivation by clearing away the trees. The substratum is everywhere limestone, the soil is naturally fertile, and in the spring of the year the surface is clothed with luxuriant pasture. "Jebel Ajlun", says Dr. Eli Smith, "presents the most charming rural scenery that I have seen in Syria; a continued forest of noble trees, chiefly the evergreen oak, *sindiân*, covers a large part of it, while the ground beneath is clothed with luxuriant grass, a foot or more in height, and decked with a rich variety of wild flowers."'[4] Speaking of this district Canon Tristram says: 'Our second hour was through real forest, by winding paths and under spreading oaks, where many a turban

[1] W. M. Thomson, *op. cit.*, p. 546.

[2] H. B. Tristram, *The Natural History of the Bible*[9], p. 8.

[3] W. M. Thomson, *op. cit.*, p. 555. As to the oak-woods of Gilead, see also J. L. Burckhardt, *Travels in Syria and the Holy Land* (London, 1822), p. 348.

[4] W. M. Thomson, *op. cit.*, pp. 574 sq., compare p. 582.

was knocked off, or mule's burden dislodged.'[1] 'Immediately beyond Khirbet Sâr we began to descend into Wady es Seir by a very steep path, through a magnificent forest of large oak-trees. That valley is very beautiful, and the mountains rise higher and higher on either side, covered to their summits with thick groves of evergreen oaks, terebinths, and other trees.'[2] Not far off, in a rocky amphitheatre commanding a wide prospect westward, and backed on all other sides by wooded hills and jagged limestone crags, are the ruins of the castle which Hyrcanus, one of the Maccabean princes, built for himself, and adorned with spacious gardens, when he retired in dudgeon to live in rural solitude far from the intrigues and tumults of Jerusalem. He was a wise man to choose so fair a spot for his retirement from the world. The neighbouring glen, the cliffs, the hill-sides wooded with oaks and terebinths, and the green undulating slopes below make up a lovely landscape, especially in spring when the oleanders convert the bed of the purling stream into a sheet of rosy bloom.[3]

The oaks which thus abound in many parts of Palestine are still regarded with superstitious veneration by the peasantry. Thus, speaking of a fine oak grove near the Lake of Phiala in northern Palestine, Thomson says: 'These oaks under which we now sit are believed to be inhabited by Jân and other spirits. Almost every village in these wadys and on those mountains has one or more of such thick oaks, which are sacred from the same superstition. Many of them in this region are believed to be inhabited by certain spirits, called *Benât Ya'kôb*—daughters of Jacob—a strange and obscure notion, in regard to which I could never obtain an intelligible explanation. It seems to be a relic of ancient idolatry, which the stringent laws of Muhammed banished in form, but could not entirely eradicate from the minds of the multitude. Indeed, the Moslems are as stupidly given to such superstitions as any class of the community. Connected with this notion, no doubt, is the custom of burying their holy men and so-called prophets under those trees, and erecting *muzârs* [domed shrines] to them there. All non-Christian sects believe that the spirits of these saints love to return to this world, and especially to visit the

[1] H. B. Tristram, *The Land of Israel*[3], p. 555.

[2] W. M. Thomson, *op. cit.*, p. 594.

[3] W. M. Thomson, *op. cit.*, p. 596; H. B. Tristram, *The Land of Israel*[3], pp. 517 sqq. As to Hyrcanus and his castle see Josephus, *Antiquit. Jud.* xii. 4. 11.

place of their tombs. . . . I have witnessed some ludicrous displays of daring enacted about such old trees by native Protestants just emancipated from this superstition; and I can point to many people who have been all their lives long, and are still, held in bondage through fear of those imaginary spirits.

'Scarcely any tree figures more largely in biblical narrative and poetry than the oak; but I observe that certain modern critics contend that it is, after all, not the oak, but the terebinth. The criticism is not quite so sweeping as that. It is merely attempted to prove, I believe, that the Hebrew word *elâh*, which in our version is generally rendered oak, should be translated terebinth. *Allon*, they say, is the true name of the oak. The Hebrew writers seem to use these names indiscriminately for the same tree or for different varieties of it, and that tree was the oak. For example, the tree in which Absalom was caught by the hair is called *elâh*, not the *allon*; and yet I am persuaded it was an oak. The battlefield on that occasion was on the mountains east of the Jordan, always celebrated for great oaks. I see it asserted by the advocates of this rendering that the oak is not a common or very striking tree in this country, implying that the terebinth is. A greater mistake could scarcely be made. Besides the oak groves north of Tabor, and in Gilead, Bashan, Hermon, and Lebanon, there are the forests, extending thirty miles at least along the hills west of Nazareth to Carmel on the north, and from there southward beyond Caesarea Palestina. To maintain, therefore, that the oak is not a striking or abundant tree in Palestine is a piece of critical hardihood tough as the tree itself.'[1]

At the romantic village of Bludan, a favourite retreat of the people of Damascus in the heat of summer, there are 'remains of an old temple of Baal; and the grove of aged oaks on the slope beneath it is still a place held in superstitious veneration by the villagers'.[2] 'In the *W. Barado*, near Damascus, where certain heathenish festival customs do yet remain amongst the Moslemîn, I have visited two groves of evergreen oaks, which are *wishing-places* for the peasantry. If anything fall to them for which they vowed, they will go to the one on a certain day in the year to break a crock there; or they lay up a new stean in a little cave which is under a rock at the other. There I have looked in, and saw it full to the

[1] W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, pp. 474–6.

[2] H. B. Tristram, *The Land of Israel*[3], p. 164.

entry of their yet whole offering-pots: in that other grove you will see the heap of their broken potsherds.'[1] Another sacred grove of oaks is at Beinu in northern Syria. A ruined Greek church stands among the trees.[2] Again, we are told that 'in a Turkish village in northern Syria there is a large and very old oak-tree, which is regarded as sacred. People burn incense to it, and bring their offerings to it, precisely in the same way as to some shrine. There is no tomb of any saint in its neighbourhood, but the people worship the tree itself'.[3]

Very often these venerated oaks are found growing singly or in groves beside one of those white-domed tombs or supposed shrines of Mohammedan saints, which may be seen from one end of Syria to the other. Many such white domes and green groves crown the tops of hills. 'Yet no one knows when, by whom, or for what special reason they first became consecrated shrines. Many of them are dedicated to the patriarchs and prophets, a few to Jesus and the apostles; some bear the name of traditionary heroes, and others appear to honour persons, places, and incidents of merely local interest. Many of these "high places" have probably come down from remote ages, through all the mutations of dynasties and religions, unchanged to the present day. We can believe this the more readily because some of them are now frequented by the oldest communities in the country, and those most opposed to each other—Arabs of the desert, Muhammedans, Metawîleh, Druses, Christians, and even Jews. We may have, therefore, in those "high places under every green tree upon the high mountains and upon the hills", not only sites of the very highest antiquity, but existing monuments, with their groves and domes, of man's ancient superstitions; and if that does not add to our veneration, it will greatly increase the interest with which we examine them. There is one of these "high places", with its groves of venerable oak-trees, on the summit of Lebanon, east of this village of Jezzin. The top of the mountain is of an oval shape, and the grove was planted regularly around it.'[4]

In like manner Captain Conder, speaking of the real, not the nominal, religion of the Syrian peasantry at the present day, writes

[1] C. M. Doughty, *Travels in Arabia Deserta* (Cambridge, 1888), i. 450.

[2] S. I. Curtiss, *Primitive Semitic Religion To-day* (Chicago, 1902), pp. 138 sq.

[3] S. I. Curtiss, *op. cit.*, p. 94.

[4] W. M. Thomson, *The Land and the Book, Lebanon, Damascus, and beyond Jordan*, pp. 169–171.

as follows: 'The professed religion of the country is Islam, the simple creed of "one God, and one messenger of God"; yet you may live for months in the out-of-the-way parts of Palestine without seeing a mosque, or hearing the call of the Muedhen to prayer. Still the people are not without a religion which shapes every action of their daily life. . . . In almost every village in the country a small building, surmounted by a white-washed dome, is observable, being the sacred chapel of the place; it is variously called *Kubbeh*, "dome"; *Mazar*, "shrine"; or *Mukâm*, "station"; the latter being a Hebrew word used in the Bible for the "places" [*meḳomoth*] of the Canaanites, which Israel was commanded to destroy "upon the high mountains, and upon the hills, and under every green tree" (Deut. xii. 2). Just as in the time of Moses, so now, the position chosen for the *Mukâm* is generally conspicuous. On the top of a peak, or on the back of a ridge, the little white dome gleams brightly in the sun; under the boughs of the spreading oak or terebinth, beside the solitary palm, or among the aged lotus-trees at a spring, one lights constantly on the low building, standing isolated or surrounded by the shallow graves of a small cemetery. The trees beside the *Mukâms* are always considered sacred, and every bough which falls is treasured within the sacred building.' 'This *Mukâm* represents the real religion of the peasant. . . . It is the sacred place from which the influence of the saint is supposed to radiate, extending in the case of a powerful Sheikh to a distance of perhaps twenty miles all round. If propitious, the Sheikh bestows good luck, health, and general blessings on his worshippers; if enraged, he will inflict palpable blows, distraction of mind, or even death. . . . When sickness prevails in a village, votive offerings are brought to the *Mukâm*, and I have often seen a little earthenware lamp brought down by some poor wife or mother, whose husband or child was sick. A vow to the saint is paid by a sacrifice called *Kôd*, or "requital", a sheep being killed close to the *Mukâm* and eaten at a feast in honour of the beneficent Sheikh.'[1] Thus the worship at the high places and green trees which pious Hebrew kings forbade and prophets thundered against thousands of years ago persists in the same places to this day. So little is an ignorant peasantry affected by the passing of empires, by the moral and spiritual revolutions which change the face of the civilized world.

To take, now, some particular examples of these local sanctuaries.

[1] C. R. Conder, *Tent Work in Palestine*, ii. 218–221.

On a ridge near the lake of Phiala in northern Palestine, there is 'a knoll covered with a copse of noble oak trees forming a truly venerable grove, with a deep religious gloom'. In the midst of the grove stands the *wely* or shrine of Sheikh 'Othman Hâzûry; it is merely a common Moslem tomb surrounded by a shabby stone wall. Just below, on one side of the knoll, is a small fountain which takes its name from the saint.[1] Again, on the summit of Jebel Osh'a, the highest mountain of Gilead, may be seen the reputed tomb of the prophet Hosea shaded by a magnificent evergreen oak. The tomb is venerated alike by Moslems, Christians, and Jews. People used to come on pilgrimage to the spot to sacrifice, pray, and feast. The prospect from the summit is esteemed the finest in all Palestine, surpassing in beauty, though not in range, the more famous view from Mount Nebo, whence Moses just before death gazed on the Promised Land, which he was not to enter, lying spread out in purple lights and shadows across the deep valley of the Jordan.[2] Again, the reputed tomb of Abel, high up a cliff beside the river Abana in the Lebanon, is surrounded by venerable oak-trees. It is a domed structure of the usual sort, and is a place of Mohammedan pilgrimage.[3] At Tibneh a rock-hewn tomb is traditionally said to be the grave of Joshua, and beside it grows a remarkable oak, which Captain Conder describes as 'perhaps the oldest and finest tree in Palestine'.[4] Again, at Tell el Kady, 'the hill of the judge,' at the source of the Jordan, a Moslem tomb is shaded by two fine trees, a holm oak and a terebinth standing side by side. Their branches are hung with rags and other rubbish, the votive offerings of pious people.[5]

Even when the hallowed oaks do not grow beside the tombs or shrines of saints they are often thus decorated with rags by

[1] Edward Robinson, *Biblical Researches in Palestine*[3], iii. 401; W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, p. 473.

[2] J. L. Burckhardt, *Travels in Syria and the Holy Land* (London, 1822), pp. 353 sq.; H. B. Tristram, *The Land of Israel*[3], p. 546; W. M. Thomson, *The Land and the Book, Lebanon, Damascus, and beyond Jordan*, pp. 585 sq. For the view from Mount Nebo, see H. B. Tristram, *The Land of Israel*[3], pp. 524–7; *id.*, *The Land of Moab*, pp. 325 sq.

[3] W. M. Thomson, *op. cit.*, p. 350.

[4] W. M. Thomson, *The Land and the Book, Southern Palestine and Jerusalem*, pp. 121 sq.

[5] H. B. Tristram, *The Land of Israel*[3], pp. 572 sq.; W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, p. 459 (who does not mention the species of the trees). Baedeker speaks only of an oak (*Palestine and Syria*[4], p. 259).

the superstitious peasantry. Thus at Seilûn, the site of the ancient Shiloh, 'is a large and noble oak-tree called Balûtat-Ibrahîm, Abraham's oak. It is one of the "inhabited trees" so common in this country, and the superstitious peasants hang bits of rags on the branches to propitiate the mysterious beings that are supposed to "inhabit" it.'[1] 'Some distance back we passed a cluster of large oak-trees, and the lower branches of one of them were hung with bits of rag of every variety of shape and colour. What is the meaning of this ornamentation? That was one of the haunted or 'inhabited trees', supposed to be the abode of evil spirits; and those bits of rag are suspended upon the branches to protect the wayfarer from their malign influence. There are many such trees in all parts of the country, and the superstitious inhabitants are afraid to sleep under them.'[2] One of these haunted trees may be seen on the site of Old Beyrout. It is a venerable evergreen oak growing near the edge of a precipice. The people hang strips of their garments on its boughs, believing that it has the power to cure sickness. One of its roots forms an arch above ground, and through this arch persons who suffer from rheumatism and lumbago crawl to be healed of their infirmities. Expectant mothers also creep through it to obtain an easy delivery. On the 21st of September men and women dance and sing all night beside the tree, the sexes dancing separately. This oak is so sacred that when a shallow sceptic dared to cut a branch of it his arm withered up.[3]

[1] W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, p. 104. Of this custom, as practised in Syria, the late Prof. S. I. Curtiss writes: 'There are many trees, apart from shrines, which are believed to be possessed by spirits, to whom vows and sacrifices are made. Such trees are often hung with rags or bits of cloth. It is not easy to determine the significance of the rags. Some say they are intended to be a constant reminder to the saint of the petition of the worshipper, like a string tied around the finger; others that the rag taken from the ailing body of the suppliant, and tied to one of the branches, is designed to transfer the illness of the person represented by the rags to the saint, who thus takes it away from the sufferers and bears it vicariously himself. Sometimes the man who is ill takes a rag from the tree, as one tears off a bit of the pall from the cenotaph of the shrine, and carries it about on his person, and so enjoys the advantage of virtue from the saint' (*Primitive Semitic Religion To-day*, p. 91). The custom of hanging rags on sacred trees is observed in many lands, though the motives for doing so are by no means always clear. See E. S. Hartland, *The Legend of Perseus*, ii. 175 sqq.

[2] W. M. Thomson, *op. cit.*, pp. 171 sq.

[3] F. Sessions, 'Some Syrian folklore notes gathered on Mount Lebanon,' *Folk-lore*, ix (1898), pp. 915 sq.; W. M. Thomson, *op. cit.*, p. 190.

In various parts of the upper valley of the Jordan there are groves of oaks and shrines dedicated to the daughters of Jacob. One of these shrines may be seen at the town of Safed. It is a small mosque containing a tomb in which the damsels are supposed to live in all the bloom of beauty. Incense is burnt at the door of the tomb. A gallant and now highly distinguished officer, engaged in the Survey of Palestine, searched the tomb carefully for the ladies, but without success.[1] The association of the daughters of Jacob with oak-trees seems to point to a belief in Dryads or nymphs of the oak.

In Hebrew the words commonly rendered 'oak' and 'terebinth' are very similar, the difference between them being in part merely a difference in the vowel points which were added to the text by the Massoretic scribes in the Middle Ages. Scholars are not agreed as to the correct equivalents of the words, so that when we meet with one or other of them in the Old Testament it is to some extent doubtful whether the tree referred to is an oak or a terebinth.[2] The terebinth (*Pistacia Terebinthus*) is still a common tree in Palestine, occurring either singly or in clumps mingled with forests of oak. The natives call it the *butm* tree. It 'is not an evergreen, as is often represented; but its small feathered lancet-shaped leaves fall in the autumn and are renewed in the spring. The flowers are small and followed by small oval berries, hanging in clusters from two to five inches long, resembling much the clusters of the vine when the grapes are just set. From incisions in the trunk there is said to flow a sort of transparent balsam,

[1] W. M. Thomson, *op. cit.*, pp. 222, 445 sq. See also above, p. 114.

[2] 'There are five similar Heb. words—*'ēl* [only in the pl. *'ēlīm*], *'ēlāh*, *'ēlōn*, *'allāh* (only Jos. xxiv. 26), and *'allōn*—the difference between which depends in part only upon the punctuation, and the special sense of each of which is not perfectly certain: Gesenius, after a careful survey of the data, arrived at the conclusion, which has been largely accepted by subsequent scholars, that *'ēl*, *'ēlāh*, *'ēlōn* denoted properly the *terebinth*, and *'allāh*, *'allōn* the *oak*' (S. R. Driver, *The Book of Genesis*[4], p. 147). See further *Encyclopaedia Biblica*, s.v. 'Terebinth'. In regard to the words in question Professor G. F. Moore maintains that 'there is no real foundation for the discrimination; the words signify in Aramaic "tree" simply; in Hebrew usually, if not exclusively, "holy tree," as the place, and primitively the object, of worship, without regard to the species' (*Commentary on Judges*[1], pp. 121 sq.). Canon Tristram held that *'ēlāh* denoted the terebinth, but that all the other words in question applied to acorn-bearing oaks. According to him, *'allōn* probably stands for the evergreen oak, and *'ēlōn* for the deciduous sorts (*The Natural History of the Bible*[9], p. 367).

constituting a very pure and fine species of turpentine, with an agreeable odour like citron or jessamine and a mild taste, and hardening gradually into a transparent gum. In Palestine nothing seems to be known of this product of the Butm.'[1] The terebinth 'is a very common tree in the southern and eastern parts of the country, being generally found in situations too warm or dry for the oak, whose place it there supplies, and which it much resembles in general appearance at a distance. It is seldom seen in clumps or groves, never in forests, but stands isolated and weird-like in some bare ravine or on a hill-side, where nothing else towers above the low brushwood. When it sheds its leaves at the beginning of winter, it still more recalls the familiar English oak, with its short and gnarled trunk, spreading and irregular limbs, and small twigs . . . Towards the north this tree becomes more scarce, but in the ancient Moab and Ammon, and in the region round Heshbon, it is the only one which relieves the monotony of the rolling downs and boundless sheepwalks.'[2] Fine specimens of the tree may be seen standing solitary in various places, for example one in the Wady es Sunt on the way from Hebron to Ramleh, another at the north-west corner of the walls of Jerusalem, another on the supposed site of the city of Adullam, and another at Shiloh.[3] And beautiful forests of mingled terebinths and oaks clothe some of the glens of the Lebanon, the hills of Naphtali and Galilee, and form a great part of the rich woodlands on the eastern side of the Jordan.[4]

Yet if we may judge from the comparative frequence of allusions to the two trees in the descriptions of travellers, the terebinth

[1] Edward Robinson, *Biblical Researches in Palestine*[3], ii. 222 sq. Compare W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, pp. 19 sq., who also says that the resin is not extracted from the tree by the natives of Palestine.

[2] H. B. Tristram, *The Natural History of the Bible*[9], pp. 400, 401.

[3] E. Robinson, *loc. cit.*; W. M. Thomson, *The Land and the Book, Southern Palestine and Jerusalem*, p. 229; *id. Central Palestine and Phoenicia*, pp. 19 sq., 49 sq., 478; H. B. Tristram, *The Land of Israel*[3], p. 159.

[4] W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, pp. 224, 257, 324, 551, 558, 559; *id. Lebanon, Damascus, and beyond Jordan*, pp. 282, 295, 502, 555, 578, 594, 596, 604 sq. See above, pp. 113, 114. On the road from Heshbon to Rabbath Ammon 'we rode up a narrow glen, rocky and rough, with fine terebinth-trees, the largest we saw in Palestine, stretching their gnarled and twisted boughs over the path' (H. B. Tristram, *The Land of Israel*[3], p. 531).

is less common in Palestine than the oak[1], and is far less often the object of superstitious regard. Canon Tristram indeed tells us that 'many terebinths remain to this day objects of veneration in their neighbourhood; and the favourite burying-place of the Bedouin sheikh is under a solitary tree. Eastern travellers will recall the "Mother of rags" on the outskirt of the desert—a terebinth covered with the votive offerings of superstition or affection'[2]; and elsewhere the same writer mentions a terebinth hung with rags at the source of the Jordan.[3] Again, Captain Conder writes that 'among the peculiar religious institutions of the country are the sacred trees, which are generally oaks, or terebinths, with names taken from some Sheikh to whom they belong. They are covered all over with rags tied to the branches, which are considered acceptable offerings.'[4] But apart from these few notices (which, however, might doubtless be multiplied by further search), I have found no evidence of a superstitious regard paid to the terebinth by Syrian peasants in modern times. The rarity of such notices compared with the abundant references to the sanctity of the oak seems to show that in Syria at the present day the oak is more commonly revered by the people than the terebinth; and when we consider the tenacity and persistence of identical forms of superstition through the ages we seem justified in concluding that in antiquity also the oak was more generally worshipped than the terebinth by the idolatrous inhabitants of the land. From this it follows that when a doubt exists as to whether in the Old Testament the Hebrew word for a sacred tree should be rendered 'oak' or 'terebinth' the preference ought to be given to the rendering 'oak'. This conclusion is confirmed by the general practice of the old Greek translators and of St. Jerome, who, in translating these passages, commonly render the doubtful word by 'oak' and not by 'terebinth'.[5] On the whole, then, the Revisers

[1] Compare the number of the references to oaks and terebinths respectively in the indices to W. M. Thomson's *The Land and the Book* (the edition in three volumes). From that work I have adduced only part of the evidence for the prevalence of the oak, but most of the evidence for the prevalence of the terebinth. No modern writer, probably, has known Syria and Palestine so well as Thomson, who spent forty-five years of his life in the country.

[2] H. B. Tristram, *The Natural History of the Bible*[9], p. 401.

[3] See above, p. 118.

[4] C. R. Conder, *Tent Work in Palestine*, ii. 233.

[5] So far as I see, there are some eighteen to twenty passages in the Old

of our English Bible have done well to translate all the words in question by 'oak' instead of by 'terebinth', except in the two passages where two of these words occur in the same verse. In these two passages[1] the Revisers render *'allon* by 'oak' but *'ēlāh* by 'terebinth'. Elsewhere they render *'ēlāh* by 'oak', but in the margin they mention 'terebinth' as an alternative rendering. I shall follow their example and cite the Revised Version in the sequel.

That the idolatrous Hebrews of antiquity revered the oak-tree is proved by the evidence of the prophets who denounced the superstition. Thus Hosea says: 'They sacrifice upon the tops of the mountains, and burn incense upon the hills, under oaks and poplars and terebinths, because the shadow thereof is good: therefore your daughters commit whoredom, and your brides commit adultery. I will not punish your daughters when they commit whoredom, nor your brides when they commit adultery; for they themselves go apart with whores, and they sacrifice with the harlots.'[2] The prophet here refers to a custom of religious prostitution which was carried on under the shadow of the sacred trees. Referring to the sacred groves of his heathenish countrymen, Ezekiel says: 'And ye shall know that I am the Lord, when their

Testament where a reference is made to an oak or a terebinth, which, from the context, may be thought to have been sacred. In thirteen of these passages the Septuagint renders the doubtful word by 'oak' (δρῦς or *βάλανος*), and in five by 'terebinth'; in the other passages the rendering is neutral. In eleven out of the eighteen to twenty passages St. Jerome, in his Latin version (the Vulgate), renders the doubtful word by 'oak' (*quercus*), and in four by 'terebinth'; in the other passages the rendering is neutral. The passages in question are Genesis xii. 6, xiii. 18, xiv. 13, xviii. 1, xxxv. 4 and 8; Deuteronomy xi. 30; Joshua xxiv. 26; Judges vi. 11 and 19, ix. 6 and 37; 1 Samuel x. 3; 1 Kings xiii. 14; 1 Chronicles x. 12; Isaiah i. 29, lvii. 5; Jeremiah ii. 34 (where the Hebrew text should be corrected by the Septuagint and the Peshitto; see below, p. 124, note 4); Ezekiel vi. 13; Hosea iv. 13. In a number of these passages the English Authorized Version is quite incorrect, rendering the doubtful word neither by 'oak' nor 'terebinth'. The English reader should consult the Revised Version. In two passages (Isaiah vi. 13; Hosea iv. 13) two of the doubtful words (*'ēlāh* and *'allōn*) occur in the same verse. In the former passage the Septuagint renders *'ēlāh* by 'terebinth' and *'allōn* by 'oak' (*βάλανος*); in the latter passage it renders *'allōn* by 'oak' and *'ēlāh* by 'shady tree'. In both passages the Vulgate renders *'ēlāh* by 'terebinth' and *'allōn* by 'oak'. My ignorance of Syriac prevents me from comparing the renderings of the Peshitto. I have to thank Professor F. C. Burkitt for kindly communicating to me the rendering of the Peshitto in Jeremiah ii. 34.

[1] Isaiah vi. 13; Hosea iv. 13. See the preceding note.

[2] Hosea iv. 13 sq.

slain men shall be among their idols round about their altars, upon every high hill, in all the tops of the mountains, and under every green tree, and under every thick oak, the place where they did offer sweet savour to all their idols.'[1] Again, Isaiah, speaking of the sinners who forsake the Lord, says: 'For they shall be ashamed of the oaks which ye have desired, and ye shall be confounded for the gardens that ye have chosen.'[2] Again, the author of the later prophecy which passes under the name of Isaiah, in denouncing the idolatry of his day, says: 'Ye that inflame yourselves among the oaks, under every green tree; that slay the children in the valleys, under the clefts of the rocks.'[3] The slaughter here referred to is no doubt the sacrifice of children to Moloch. Jeremiah alludes to the same practice in a passionate address to sinful Israel: 'Also in thy skirts is found the blood of the souls of the innocent poor: I have not found it at the place of breaking in, but upon every oak.'[4] Thus it would seem that the blood of the sacrificed children was smeared on, or at least offered in some form to, the sacred oaks. In this connexion it should be remembered that the victims were slaughtered before being burned in the fire[5], so that it would be possible to use their blood as an unguent or a libation. The Gallas of East Africa pour the blood of animals at the foot of their sacred trees in order to prevent them from withering, and sometimes they

[1] Ezekiel vi. 13. For 'oak' the Revised Version has 'terebinth' in the margin.

[2] Isaiah i. 29. For 'oaks' the Revised Version has 'terebinths' in the margin.

[3] Isaiah lvii. 5. For 'among the oaks' the Revised Version has 'with idols' in the margin. But the former rendering (or 'among the terebinths') is to be preferred. See Professor J. Skinner in his note on the passage (*Isaiah xl–lxvi*, p. 155, in the *Cambridge Bible for Schools and Colleges*).

[4] Jeremiah ii. 34, where the meaningless אֵלֶּה ('these') of the Massoretic text should be corrected into אַלָּה or אֵלָה ('oak' or 'terebinth') in accordance with the readings of the Septuagint (*ἐπὶ πάσῃ δρυΐ*), and of the Syriac Version. The change is merely one of punctuation; the original Hebrew text remains unaffected. The vague sense of the preposition עַל leaves it uncertain whether the blood was smeared on the trees or poured out at their foot. However, Professor Kennett writes to me that he believes the textual corruption in Jeremiah ii. 34 to be too deep to be healed by the slight emendation I have adopted. He conjectures that the last clause of the verse is defective through the omission of a word or words.

[5] Genesis xxii; Ezekiel xvi. 20 sq., xxiii. 39; G. F. Moore, in *Encyclopaedia Biblica*, iii. 3184 sq.

smear the trunks and boughs with blood, butter, and milk.[1] In like manner the old Prussians sprinkled the blood of their sacrifices on the holy oak at Romove [2], and Lucan says that in the sacred Druidical grove at Marseilles every tree was washed with human blood.[3]

But if in the later times of Israel the worship of the oak or the terebinth was denounced by the prophets as a heathenish rite, there is a good deal of evidence to show that at an earlier period sacred oaks or terebinths played an important part in the popular religion, and that Jehovah himself was closely associated with them. At all events it is remarkable how often God or his angel is said to have revealed himself to one of the old patriarchs or heroes at an oak or a terebinth. Thus the first recorded appearance of Jehovah to Abraham took place at the oracular oak or terebinth of Shechem, and there Abraham built him an altar.[4] Again, we are told that Abraham dwelt beside the oaks or terebinths of Mamre at Hebron, and that he built there also an altar to the Lord.[5] And it was there, beside the oaks or terebinths of Mamre, as he sat in his tent in the heat of the day, that God appeared to him in the likeness of three men, and there under the shadow of the trees the Deity partook of the flesh, the milk, and the curds which the hospitable patriarch offered him.[6] So too the angel of the Lord came and sat under the oak or terebinth of Ophrah, and Gideon, who was busy threshing the wheat, brought him the flesh and broth of a kid and unleavened cakes to eat under the oak. But the angel, instead of eating the food, bade Gideon lay the flesh and cakes on a rock and pour out the broth; then with a touch of his staff he drew fire from the rock, and the flame consumed the flesh and the cakes. After that the heavenly, or perhaps the arboreal,

[1] Ph. Paulitschke, *Ethnographie Nordost-Afrikas, die geistige Cultur der Danâkil, Galla und Somâl* (Berlin, 1896), pp. 34 sq.; *id.*, *Ethnographie Nordost-Afrikas, die materielle Cultur der Danâkil, Galla und Somâl* (Berlin, 1893), p. 152. Compare O. Baumann, *Usambara und seine Nachbargebiete* (Berlin, 1891), p. 142.

[2] Hartknoch, *Alt und Neues Preussen* (Frankfort and Leipsic, 1684), p. 159.

[3] Lucan, *Pharsalia*, iii. 405.

[4] Genesis xii. 6–9. The 'oak of Moreh' (Revised Version, 'terebinth' margin) is the 'directing oak' or 'oak of the director'; where the reference is to oracular direction given either by the tree itself or by the priests who served it. Oracular oaks or terebinths (oaks or terebinths of Moreh) are mentioned also in this neighbourhood by the author of Deuteronomy (xi. 30). See Professor S. R. Driver, *The Book of Genesis* [4], pp. 146 sq.; *id.*, *Commentary on Deuteronomy* [3], p. 134.

[5] Genesis xiii. 18, xiv. 13.

[6] Genesis xviii. 1–8, with Professor Driver's note on verse 8.

visitant vanished, and Gideon, like Abraham, built an altar on the spot.[1]

There was an oracular oak or terebinth near Shechem as well as at Mamre[2]; whether it was the same tree under which God appeared to Abraham, we do not know. Its name, 'the oak or terebinth of the augurs', seems to show that a set of wizards or Druids, if we may call them so, had their station at the sacred tree in order to interpret to inquirers the rustling of the leaves in the wind, the cooing of wood-pigeons in the branches, or such other omens as the spirit of the oak vouchsafed to his worshippers. The beautiful vale of Shechem, embosomed in olives, orange-groves, and palms, and watered by plenteous rills, still presents perhaps the richest landscape in all Palestine[3], and of old it would seem to have been a great seat of tree-worship. At all events in its history we meet again and again with the mention of oaks or terebinths which from the context appear to have been sacred. Thus Jacob took the idols or 'strange gods' of his household, together with the earrings which had probably served as amulets, and buried them under the oak or terebinth at Shechem.[4] According to Eustathius the tree was a terebinth and was worshipped by the people of the neighbourhood down to his own time. An altar stood beside it on which sacrifices were offered.[5] Again, it was under the oak by the sanctuary of the Lord at Shechem that Joshua set up a great stone as a witness, saying to the Israelites, 'Behold this stone shall be a witness against us; for it hath heard all the words of the Lord which he spake unto us: it shall be therefore a witness against you, lest ye deny your

[1] Judges vi. 11–24.

[2] Judges ix. 37, 'the oak of Meonenim' (Revised Version), 'the augurs' oak or terebinth' (Revised Version, margin). Compare G. F. Moore, *Commentary on Judges*[2], p. 260. We read of a man of God sitting under an oak (1 Kings xiii. 14); but the tree need not have been oracular.

[3] H. B. Tristram, *The Land of Israel*[3], pp. 135, 147. The modern name of Shechem is Nablous. The town 'has the mulberry, the orange, the pomegranate, and other trees growing amongst the houses, and wreathed and festooned with delicious perfume during the months of April and May. There the bulbul delights to sing, and hundreds of other birds unite to swell the chorus. The people of Nâblus maintain that theirs is the most musical valley in Palestine, nor am I disposed to contradict them' (W. M. Thomson, *The Land and the Book, Central Palestine and Phoenicia*, p. 143).

[4] Genesis xxxv. 4, with Professor S. R. Driver's note.

[5] Eustathius, quoted by H. Reland, *Palaestina*, p. 712.

God.'[1] And it was at 'the oak of the pillar' in Shechem that the men of the city made Abimelech king.[2] The oak or terebinth may have been supposed to stand in some close relation to the king; for elsewhere we read of a tree called 'the king's oak' on the borders of the tribe of Asher[3]; and according to one account the bones of Saul and of his sons were buried under the oak or terebinth at Jabesh[4]. So when Rebekah's nurse Deborah died, she was buried below Bethel under the oak, and hence the tree was called the Oak of Weeping.[5] The Oak of Weeping may perhaps have been the very oak at which, according to the directions of Samuel the prophet, Saul shortly before his coronation was to meet three men going up to sacrifice to the Lord at Bethel, who would salute him and give him two of their loaves.[6] This salutation of the future king by the three men at the oak reminds us of the meeting of Abraham with God in the likeness of three men under the oaks of Mamre. In the original story the greeting of the three men at the oak may have had a far deeper meaning than transpires in the form in which the narrative has come down to us. Taken along with the coronation of Abimelech under an oak it suggests that the spirit of the oak, perhaps in triple form, was expected to bless the king at his inauguration. In the light of this suggestion the burial of Saul's bones under an oak seems to acquire a fresh significance. The king, who at the beginning of his reign had been blessed by the god of the oak, was fittingly laid to his last rest under the sacred tree.

But of all the holy trees of ancient Palestine by far the most famous and the most popular was apparently the oak or terebinth of Mamre, where God revealed himself to Abraham, the founder of the Israelitish nation, in the likeness of three men. Was the tree an oak or a terebinth? The ancient testimonies are conflicting, but the balance of evidence is in favour of the terebinth.[7] Josephus tells us that in his day many monuments of Abraham, finely built

[1] Joshua xxiv. 26 sq.

[2] Judges ix. 6 ('terebinth,' Revised Version, margin).

[3] Joshua xix. 26, where Allamelech means 'the king's oak'.

[4] 1 Chronicles x. 12. According to another account (1 Samuel xxxi. 8) the tree under which the royal bones were buried was a tamarisk.

[5] Genesis xxxv. 8.

[6] 1 Samuel x. 3.

[7] The passages of ancient writers which refer to the tree are collected by H. Reland, *Palaestina*, pp. 711–15, and by Valesius in his commentary on Eusebius, *Vit. Constantini*, iii. 53 (Migne's *Patrologia Graeca*, xx. 1113 sqq.).

of beautiful marble, were shown at Hebron, and that six furlongs from the town grew a very large terebinth, which was said to have stood there since the creation of the world.[1] Though he does not expressly say so, we may assume that this terebinth was the one under which Abraham was believed to have entertained the angels. Again, Eusebius affirms that the terebinth remained down to his own time in the early part of the fourth century A.D., and that the spot was still revered as divine by the people of the neighbourhood. A holy picture represented the three mysterious guests who partook of Abraham's hospitality under the tree; the middle of the three figures excelled the rest in honour, and him the good bishop identified with 'Our Lord himself, our Saviour, whom even they who know Him not adore'.[2] All three angels were worshipped by the people of the neighbourhood.[3] They curiously remind us of the three gods whose images were worshipped in the holy oak at Romove, the religious centre of the heathen Prussians.[4] Perhaps both at Hebron and at Romove the tree-god was for some reason conceived in triple form. A pilgrim of Bordeaux, author of the oldest *Itinerary of Jerusalem*, writing in the year 333 A.D., tells us that the terebinth was two miles from Hebron, and that a fine basilica had been built there by order of Constantine. Yet from the manner of his reference to it we gather that 'the terebinth' was in his time merely the name of a place, the tree itself having disappeared.[5] Certainly Jerome, writing later in the same century, seems to imply that the tree no longer existed. For he says that the oak of Abraham or of Mamre was shown down to the reign of Constantine, and that 'the place of the terebinth'

[1] Josephus, *Bell. Jud.* iv. 9. 7.

[2] Eusebius, *Demonstratio Evangelica*, v. 9 (Migne's *Patrologia Graeca*, xxii. 384). In his *Onomasticon* Eusebius, speaking of Hebron, mentions both the oak of Abraham and the terebinth: ἡ δρῦς Ἀβραάμ, καὶ τὸ μνῆμα αὐτόθι θεωρεῖται, καὶ θρησκεύεται ἐπιφανῶς πρὸς τῶν ἐχθρῶν [*sic*] ἡ θερέβινθος καὶ οἱ τῷ Ἀβραὰμ ἐπιξενωθέντες ἄγγελοι (Eusebius, *Onomasticon*, s. v. Ἀρβώ, pp. 54, 56, ed. F. Larsow and G. Parthey). In this passage we must read πλησιοχώρων, or ἐγχωρίων, or some such word for ἐχθρῶν.

[3] Eusebius, *Onomasticon*, s. v. Ἀρβώ. See the preceding note.

[4] Hartknoch, *Alt und Neues Preussen* (Frankfort and Leipsic, 1684), pp. 116 sq.

[5] 'Itinerarium Burdigalense', in *Itinera Hierosolymitana*, rec. P. Geyer (Vienna, 1898), p. 25: *Inde Terebintho milia viii. Ubi Abraham habitavit et puteum fodit sub arbore terebintho et cum angelis locutus est et cibum sumpsit, ibi basilica facta est jussu Constantini mirae pulchritudinis. Inde terebintho Cebron milia ii.*

was worshipped superstitiously by all the people round about, because Abraham had there entertained the angels.[1]

When Constantine determined to build a church at the sacred tree, he communicated his intention in a letter to Eusebius, bishop of Caesarea, who has fortunately preserved a copy of the letter in his life of the emperor. I will extract from it the passage which relates to the holy tree: 'The place which is called "at the Oak of Mamre", where we learn that Abraham had his home, is said to be polluted by certain superstitious persons in various ways; for it is reported that most damnable idols are set up beside it, and that an altar stands hard by, and that unclean sacrifices are constantly offered. Wherefore, seeing that this appears to be foreign to the present age and unworthy of the holiness of the place, I wish your Grace to know that I have written to the right honourable Count Acacius, my friend, commanding that without delay all the idols found at the aforesaid place shall be committed to the flames, and the altar overturned; and any one who after this decree may dare to commit impiety in such a place shall be deemed liable to punishment. We have ordered that the spot shall be adorned with the pure building of a basilica, in order that it may be made a meeting-place worthy of holy men.'[2]

In this letter it will be observed that the emperor speaks of the sacred tree as an oak, not as a terebinth, and it is called an oak also by the Church historians Socrates[3] and Sozomenus[4]. But little weight can be given to their testimony, since all three probably followed the reading of the Septuagint, which calls the tree an oak, not a terebinth.[5] It is probably in deference to the authority of the Septuagint that Eusebius himself speaks of "the oak of Abraham" in the very passage in which he tells us that the terebinth existed to his own time.[6] The Church historian Sozomenus has bequeathed to us a curious and valuable description of the festival

[1] Jerome, *Liber de situ et nominibus locorum Hebraicorum*, s. v. '*Arboc*' (Migne's *Patrologia Latina*, xxiii. 862). This treatise of Jerome, which is substantially a translation of the *Onomasticon* of Eusebius, was written about 388 A. D. It is printed in the convenient edition of the latter work by Larsow and Parthey.

[2] Eusebius, *Vit. Constantini*, iii. 51–3 (Migne's *Patrologia Graeca*, xx. 1112 sqq.).

[3] Socrates, *Historia Ecclesiastica*, i. 18 (Migne's *Patrologia Graeca*, lxvii. 124), who seems to draw his information from Eusebius's *Life of Constantine*.

[4] Sozomenus, *Historia Ecclesiastica*, ii. 4 (Migne's *Patrologia Graeca*, lxvii. 941, 944). Yet while he speaks of 'the oak called Mamre', this historian tells us that the place itself was called Terebinth.

[5] Genesis xiii. 18, xiv. 13, xviii. 1.

[6] See above, p. 128, note 2.

which down to the time of Constantine, or even later, was held every summer at the sacred tree. His account runs thus:

'I must now relate the decree which the Emperor Constantine passed with regard to what is called the oak of Mamre. This place, which they now call Terebinth, is fifteen furlongs north of Hebron and about two hundred and fifty furlongs from Jerusalem. It is a true tale that with the angels sent against the people of Sodom the Son of God appeared to Abraham and told him of the birth of his son. There every year a famous festival is still held in summer time by the people of the neighbourhood as well as by the inhabitants of the more distant parts of Palestine and by the Phoenicians and Arabians. Very many also assemble for trade, to buy and sell; for every one sets great store on the festival. The Jews do so because they pride themselves on Abraham as their founder; the Greeks do so on account of the visit of the angels; and the Christians do so also because there appeared at that time to the pious man One who in after ages made himself manifest through the Virgin for the salvation of mankind. Each, after the manner of his faith, does honour to the place, some praying to the God of all, some invoking the angels and pouring wine, or offering incense, or an ox, or a goat, or a sheep, or a cock. For every man fattened a valuable animal throughout the year, vowing to keep it for himself and his family to feast upon at the festival on the spot. And all of them here refrain from women, either out of respect to the place or lest some evil should befall them through the wrath of God, though the women beautify and adorn their persons specially, as at a festival, and show themselves freely in public. Yet there is no lewd conduct, though the sexes camp together and sleep promiscuously. For the ground is ploughed and open to the sky, and there are no houses except the ancient house of Abraham at the oak and the well that was made by him. But at the time of the festival no one draws water from the well. For, after the Greek fashion, some set burning lamps there; others poured wine on it, or threw in cakes, money, perfumes, or incense. On that account, probably, the water was rendered unfit to drink by being mixed with the things thrown into it. The performance of these ceremonies according to Greek ritual was reported to the Emperor Constantine by his wife's mother, who had gone to the place in fulfilment of a vow.' [1]

[1] Sozomenus, *Historia Ecclesiastica*, ii. 4 (Migne's *Patrologia Graeca*, lxvii. 941, 944).

Thus it appears that at Hebron an old heathen worship of the sacred tree and the sacred well survived in full force down to the establishment of Christianity. The fair which was held along with the summer festival appears to have drawn merchants together from many quarters of the Semitic world. It played a melancholy part in the history of the Jews; for at this fair, after the last siege and destruction of Jerusalem by the Romans under Hadrian in the year 119 A. D., a vast multitude of captive men, women, and children was sold into slavery.[1] So the Jewish nation came to an end on the very spot where it was traditionally said to have been founded by Abraham, at the sacred oak or terebinth of Mamre. The tree, or rather its successor, is shown to this day in a grassy field a mile and a half to the west of Hebron. It is a fine old evergreen oak (*Quercus pseudo-coccifera*), the noblest tree in southern Palestine. The trunk is twenty-three feet in girth, and the span of its spreading branches measures ninety feet. Thus in the long rivalry between the oak and the terebinth for the place of honour at Mamre the oak has won. There is not a single large terebinth in the neighbourhood of Hebron.[2]

§ 3. *The Covenant on the Cairn.*

When Jacob fled from Paddan-aram with his wives and his children, his camels and his cattle, Laban pursued after him and came up with the long lumbering train of fugitives in the beautiful wooded mountains of Gilead, to the east of the Jordan. The two kinsmen agreed to make a covenant, and for that purpose they gathered stones, piled them up into a cairn to be a witness between them, and partook of food on the cairn.[3] Here the eating of food

[1] Jerome, *Commentary on Jeremiah*, xxxi (Migne's *Patrologia Latina*, xxiv. 877); *Chronicon Paschale*, ed. L. Dindorf, i. 474.

[2] Edward Robinson, *Biblical Researches in Palestine*[3], ii. 81 sq.; W. M. Thomson, *The Land and the Book, Southern Palestine and Jerusalem*, pp. 282–4; H. B. Tristram, *The Land of Israel*[3], pp. 382–4; *id.*, *The Natural History of the Bible*[9], p. 369; Baedeker, *Palestine and Syria*[4], p. 115.

[3] Genesis xxxi. 17–55. In verse 46 the Revised Version translates: 'and they did eat there by the heap,' where the Authorized Version renders: 'and they did eat there upon the heap.' The parallels which I adduce in the text make it probable that the Authorized Version is here right and the Revised Version wrong. The primary sense of the preposition in question (עַל) is certainly 'upon', and there is no reason to depart from it in the present passage.

upon the stones was probably intended to ratify the covenant. How it was supposed to do so may perhaps be gathered from a Norse custom described by the old Danish historian Saxo Grammaticus. He tells us that 'the ancients, when they were to choose a king, were wont to stand on stones planted in the ground, and to proclaim their votes, in order to foreshadow from the steadfastness of the stones that the deed would be lasting.'[1] In reality the stability of the stones may have been thought to pass into the person who stood on them and so to confirm his vote. Thus we read of a mythical Rajah of Java who bore the title of Rajah Sela Perwata, 'which in the common language is the same as Wátu Gúnung, a name conferred upon him from his having rested on a mountain like a stone, and obtained his strength and power thereby, without other aid or assistance.'[2] At a Brahman marriage in southern India 'the bridegroom takes up in his hands the right foot of the bride, and places it on a mill-stone seven times. This is known as *saptapadi* (seven feet), and is the essential and binding portion of the marriage ceremony. The bride is exhorted to be as fixed in constancy as the stone on which her foot has thus been placed.'[3] Similarly at initiation a Brahman boy is made to tread with his right foot on a stone, while the words are repeated: 'Tread on this stone; like a stone be firm.'[4] Among the Kookies of Northern Cachar at marriage 'the young couple place a foot each upon a large stone in the centre of the village, and the Ghalim [head-man] sprinkles them with water, and pronounces an exhortation to general virtue and conjugal fidelity, together with a blessing and the expression of hopes regarding numerous progeny'.[5] In Madagascar it is believed that you can guard against the instability of earthly bliss by burying a stone under the main post or under the threshold

[1] *The First Nine Books of the Danish History of Saxo Grammaticus*, translated by O. Elton, p. 16. The original runs thus: *Lecturi regem veteres affixis humo saxis insistere suffragiaque promere consueverant, subjectorum lapidum firmitate facti ominaturi* (*Historia Danica*, lib. i., p. 22, ed. P. E. Müller).

[2] T. S. Raffles, *History of Java* (London, 1817), i. 377.

[3] E. Thurston, *Ethnographic Notes in Southern India* (Madras, 1906), p. 1. Compare Sonnerat, *Voyage aux Indes Orientales et à la Chine* (Paris, 1782), i. 81.

[4] *Grihya-Sûtras*, translated by H. Oldenberg, Part ii., p. 146 (*Sacred Books of the East*, vol. xxx).

[5] Lieut. R. Stewart, 'Notes on Northern Cachar,' *Journal of the Asiatic Society of Bengal*, xxiv (1855), pp. 620 sq.

of your house.[1] The weight of the stone is clearly supposed to counteract the levity of fortune.

On the same principle we can explain the custom of swearing with one foot or with both feet planted on a stone. The idea seems to be that the solid enduring quality of the stone will somehow pass into the swearer and so ensure that the oath will be kept. Thus there was a stone at Athens on which the nine archons stood when they swore to rule justly and according to the laws.[2] A little to the west of St. Columba's tomb in Iona 'lie the black stones, which are so called, not from their colour, for that is grey, but from the effects that tradition says ensued upon perjury, if any one became guilty of it after swearing on these stones in the usual manner; for an oath made on them was decisive in all controversies. Mac-Donald, king of the isles, delivered the rights of their lands to his vassals in the isles and continent, with uplifted hands and bended knees, on the black stones; and in this posture, before many witnesses, he solemnly swore that he would never recall those rights which he then granted; and this was instead of his great seal. Hence it is that when one was certain of what he affirmed he said positively, I have freedom to swear this matter upon the black stones.'[3] Again, in the island of Fladda, another of the Hebrides, there used to be a round blue stone on which people swore decisive oaths.[4] When two Bogos of eastern Africa have a dispute, they will sometimes settle it at a certain stone, which one of them mounts. His adversary calls down the most dreadful curses on him if he forswears himself, and to every curse the man on the stone answers 'Amen!'[5] At Ghosegong in the Garrow Hills of north-eastern Bengal, there is a stone on which the natives swear their most solemn oaths. In doing so they first salute the stone, then with their hands joined and uplifted, and their eyes steadfastly fixed on the hills, they call on Mahadeva to

[1] Father Abinale, 'Astrologie Malgache,' *Missions Catholiques*, xi (1879), p. 482: *Qui va enterrer un caillou au pied du grand poteau de la case ou sous le seuil de la porte, a l'effet de se donner un destin de poids et de fidélité, après s'être lavé d'un destin d'inconstance.*

[2] Aristotle, *Constitution of Athens*, 7 and 55; Plutarch, *Solon*, 25; Pollux, viii. 86.

[3] Martin, 'Description of the Western Islands of Scotland,' in Pinkerton's *Voyages and Travels*, iii. 657.

[4] Martin, *op. cit.*, pp. 627 sq.

[5] W. Munzinger, *Sitten und Recht der Bogos* (Winterthur, 1859), pp. 33 sq.

had closed on him his name might never again be mentioned under pain of death. There traitors rotted, and there the perjured king of Armenia ended his days.[1]

§ 4. *Jacob at the ford of the Jabbok.*

After parting from Laban at the cairn, Jacob, with his wives and children, his flocks and his herds, pursued his way southward to meet his brother Esau. From the breezy, wooded heights of the mountains of Gilead he now plunged down into the profound ravine of the Jabbok thousands of feet below. The descent occupies several hours, and the traveller who accomplishes it feels that, in reaching the bottom of the deep glen, he has passed into a different climate. From the pine-woods and chilly winds of the high uplands he descends first in about an hour's time to the balmy atmosphere of the village of Burmeh, embowered in fruit-trees, shrubs, and flowers, where the clear cold water of a fine fountain will slake his thirst at the noonday rest. Still continuing the descent, he goes steeply down another two thousand feet to find himself breathing a hot-house air amid luxuriant semi-tropical vegetation in the depths of the great lyn of the Jabbok. The gorge is in the highest degree wild and picturesque. On either hand the cliffs rise almost perpendicularly to a great height; you look up the precipices or steep banks to the sky-line far above. At the bottom of this mighty chasm the Jabbok flows with a powerful current, its blue-grey water fringed and hidden even at a short distance by a dense jungle of tall oleanders, whose crimson blossoms add a glow of colour to the glen in early summer. The Blue River, for such is its modern name, runs fast and strong. Even in ordinary times the water reaches to the horses' girths, and sometimes the stream is quite unfordable, the flood washing grass and bushes high up the banks on either hand. On the opposite or southern side the ascent from the ford is again exceedingly steep. The path winds up and up; the traveller must dismount and lead his horse.[2] It was up that

[1] Procopius, *De Bello Persico*, i. 5.

[2] W. M. Thomson, *The Land and the Book, Lebanon, Damascus, and beyond Jordan*, pp. 583 sqq.; H. B. Tristram, *The Land of Israel*[3], p. 549. The ford here described is that of Mukhâdat en Nusranîyeh, 'the Ford of the Christian Woman,' on the road between Reimûn and Shihân. It is the ford on the regular road from north to south, and is probably therefore the one at which tradition placed the passage

long ascent that Jacob, lingering alone by the ford in the gloaming, watched the camels labouring and heard the cries of the drivers growing fainter and fainter above him, till sight and sound of them alike were lost in the darkness and the distance.

The scene may help us to understand the strange adventure which befell Jacob at the passage of the river. He had sent his wives, his handmaids, and his children, riding on camels, across the river, and all his flocks and herds had preceded or followed them. So he remained alone at the ford. It was night, probably a moonlight summer night; for it is unlikely that with such a long train he would have attempted to ford the river in the dark or in the winter, when the current would run fast and deep. Be that as it may, in the moonlight or in the dark, beside the rushing river, a man wrestled with him all night long, till morning flushed the wooded crests of the ravine high above the struggling pair in the shadows below. The stranger looked up and saw the light and said, 'Let me go, for the day breaketh.' So the ghost of Hamlet's father faded at cockcrow; so Mephistopheles in the prison warned Faust, with the hammering of the gallows in his ears, to hurry, for the day, Gretchen's last day, was breaking. But Jacob clung to the man and said, 'I will not let thee go, except thou bless me.' The stranger asked him his name, and when Jacob told it he said, 'Thy name shall be called no more Jacob, but Israel; for thou hast striven with God and with men, and hast prevailed.' But when Jacob inquired of him, 'Tell me, I pray thee, thy name,' the man refused to mention it, and having given the blessing which Jacob had extorted, he vanished. So Jacob called the name of the place Peniel, that is the Face of God; 'For,' said he, 'I have seen God face to face, and my life is preserved.' Soon after the sun rose and shone on Jacob, and as it did so he limped; for in the struggle his adversary had touched him on the hollow of the thigh.

of Jacob with his family and his herds. In describing the gorge and the ford I have followed closely the accounts of Thomson and Tristram, who both passed this way and wrote as eye-witnesses. A very different impression of the scenery of the Jabbok is given by Professor G. A. Smith's eloquent description (*Historical Geography of the Holy Land*, p. 584), which probably applies mainly either to the upper or the lower reaches of the river, before it has entered the great cañon, or after it has emerged from it into the broad strath of the Jordan. In these districts, accordingly, it would seem that the aspect of the river and its banks is one of pastoral peace and sweet rural charm, a landscape of Constable rather than of Salvator Rosa.

'Therefore the children of Israel eat not the sinew of the hip which is upon the hollow of the thigh unto this day: because he touched the hollow of Jacob's thigh in the sinew of the hip.'[1]

The story is obscure, and it is probable that some of its original features have been deliberately modified or omitted by the compilers of Genesis because they savoured of heathendom. Hence any explanation of it must be to a great extent conjectural. But taking it in connexion with the natural features of the place where the scene of the story is laid, and with the other legends of a similar character which I shall adduce, we may perhaps provisionally suppose that Jacob's mysterious adversary was the spirit or jinnee of the river, and that the struggle was purposely sought by Jacob for the sake of obtaining his blessing. This would explain why he sent on his long train of women, servants, and animals, and waited alone in the darkness by the ford. He might calculate that the shy river-god, scared by the trampling and splashing of so great a caravan through the water, would lurk in a deep pool or a brake of oleanders at a safe distance, and that when all had passed and silence again reigned, except for the usual monotonous swish of the current, curiosity would lead him to venture out from his lair and inspect the ford, the scene of all this hubbub and disturbance. Then the subtle Jacob, lying in wait, would pounce out and grapple with him till he had obtained the coveted blessing. It was thus that Menelaus caught the shy sea-god Proteus sleeping at high noon among the seals on the yellow sands, and compelled him reluctantly to say his sooth.[2] It was thus that Peleus caught the sea-goddess Thetis and won her, a Grecian Undine, for his wife.[3] In both these Greek legends the supple, slippery water-spirit writhes in the grip of his or her captor, slipping through his hands again and again and shifting his or her shape from lion to serpent, from serpent to water, and so forth, in the effort to escape; not till he is at the end of all his shifts and sees no hope of evading his determined adversary does he at last consent to grant the wished-for boon. So, too, when Hercules wrestled with the river-god Achelous for the possession of the fair Dejanira, the water-sprite turned himself first into a serpent and then into

[1] Genesis xxxi. 54–xxxii. For the camels on which Jacob's family rode, see *id.* xxxi. 17.

[2] Homer, *Odyssey* iv. 354–570.

[3] Apollodorus, iii. 13. 5; Scholiast on Pindar, *Nem.* iii. 60.

a bull in order to give the brawny hero the slip; but all in vain.[1]

These parallels suggest that in the original form of the tale Jacob's adversary may in like manner have shifted his shape to evade his importunate suitor. A trace of such divine metamorphoses perhaps survives in the story of God's revelation of himself to Elijah on Mount Horeb; the wind, the earthquake, and the fire in that sublime narrative may in the first version of it have been disguises assumed, one after the other, by the reluctant deity until, vanquished by the prophet's perseverance, he revealed himself in a still small voice.[2] For it is to be observed that water-spirits are not the only class of supernatural beings for whom men have laid wait in order to wring from them a blessing or an oracle. Thus the Phrygian god Silenus is said, in spite of his dissipated habits, to have possessed a large stock of general information which, like Proteus, he only imparted on compulsion. So Midas, king of Phrygia, caught him by mixing wine with the water of a spring from which, in a moment of weakness, the sage had condescended to drink. When he woke from his drunken nap, Silenus found himself a prisoner, and he had to hold high discourse on the world and the vanity of human life before the king would let him go. Some of the gravest writers of antiquity have bequeathed to us a more or less accurate report of the sermon which the jolly toper preached beside the plashing wayside spring or, according to others, in a bower of roses.[3] By a stratagem like that of Midas it is said that Numa caught the rustic deities Picus and Faunus and compelled them to draw down Jupiter himself from the sky by their charms and spells.[4]

The view that Jacob's adversary at the ford of the Jabbok was the river-god himself may perhaps be confirmed by the observation that it has been a common practice with many peoples to propitiate the fickle and dangerous spirits of the water at fords. Hesiod says that when you are about to ford a river you should look at the running water and pray and wash your hands; for he who wades

[1] Ovid, *Metamorph.* ix. 62–86; compare Sophocles, *Trachiniae*, 9–21.

[2] 1 Kings xix. 8–13.

[3] Xenophon, *Anabasis*, i. 2. 13; Pausanias, i. 4. 5; Herodotus, viii. 138; Plutarch, *Consol. ad Apollon.* 27; Aelian, *Var. Hist.* iii. 18; Philostratus, *Vit. Apollon.* vi. 27; Himerius, *Eclog.* xvi. 5; Cicero, *Tuscul. Disput.* i. 48. 114; Servius on Virgil, *Ecl.* vi. 13.

[4] Ovid, *Fasti*, iii. 289–348.

through a stream with unwashed hands incurs the wrath of the gods.[1] When the Spartan king Cleomenes, intending to invade Argolis, came with his army to the banks of the Erasinus, he sacrificed to the river, but the omens were unfavourable to his crossing. Thereupon the king remarked that he admired the patriotism of the river-god in not betraying his people, but that he would invade Argolis in spite of him. With that he led his men to the sea-shore, sacrificed a bull to the sea, and transported his army in ships to the enemy's country.[2] When the Persian host under Xerxes came to the river Strymon in Thrace, the Magians sacrificed white horses and performed other strange ceremonies before they crossed the stream.[3] Lucullus at the head of a Roman army sacrificed a bull to the Euphrates at his passage of the river.[4] 'On the river-bank the Peruvians would scoop up a handful of water and drink it, praying the river-deity to let them cross or to give them fish, and they threw maize into the stream as a propitiatory offering; even to this day the Indians of the Cordilleras perform the ceremonial sip before they will pass a river on foot or horseback.'[5] 'It is a custom among native tribes of South Africa to pay respect to rivers, which would appear to intimate that formerly they were worshipped, or rather that individual rivers were supposed to be the dwelling-place of a spirit. Thus, when a river has been safely crossed, it is the custom in some parts to throw a stone into its waters, and to praise the *itongo*. . . . When Dingan's army was going against Umzilikazi, on reaching the banks of the Ubulinganto, they saluted it, saying, "*Sa ku bona, bulinganto*," and having strewed animal charcoal (*umsizi*) on the water, the soldiers were made to drink it. The object of this was to deprecate some evil power destructive to life, which was supposed to be possessed by the river.'[6] From another writer we learn that Caffres spit on the stones which they throw into the water at crossing a river. He tells us that formerly they 'were in the habit of either sacrificing some animal

[1] Hesiod, *Works and Days*, 737–41. As to the Greek worship of rivers, see the evidence collected by R. Karsten, *Studies in primitive Greek religion* (Helsingfors, 1907), pp. 29 sqq.

[2] Herodotus, vi. 76.

[3] Herodotus, vii. 113.

[4] Plutarch, *Lucullus*, 24.

[5] E. B. Tylor, *Primitive Culture*[2], ii. 210.

[6] Callaway, *Nursery Tales, Traditions and Histories of the Zulus*, i. 90, note [20].

or offering some grain to appease ancestral spirits living in the river. The Bushmen used to offer up some game they had killed, or in the absence of that would offer up an arrow.'[1] A third writer informs us that in the belief of the Bantu tribes of south-eastern Africa 'rivers are inhabited by demons or malignant spirits, and it is necessary to propitiate these on crossing an unknown stream, by throwing a handful of corn or some other offering, even if it is of no intrinsic value, into the water'.[2] When the Masai cross a stream they throw a handful of grass into the water as an offering; for grass, the source of life to their cattle, plays an important part in Masai superstition and ritual.[3]

The Badagas, a tribe of the Neilgherry Hills in southern India, believe in a deity called Gangamma, 'who is supposed to be present at every stream, and especially so at the Koondé and Pykáré rivers, into which it was formerly the practice for every owner of cattle, which had to cross them at their height, to throw a quarter of a rupee, because their cattle used frequently to be carried away by the current and destroyed. It is enumerated amongst the greatest sins of every deceased Badaga at his funeral that he had crossed a stream without paying due adoration to Gangamma.'[4] Again, the Todas, another smaller but better known tribe of the same hills, regard two of their rivers, the Teipakh (Paikara) and the Pakhwar (Avalanche), as gods or the abodes of gods. Every person in crossing one of these streams must put his right arm outside of his cloak in token of respect. Formerly these rivers might only be crossed on certain days of the week. When two men who are sons of a brother and a sister respectively pass in company over either of the sacred streams they have to perform a special ceremony. As they approach the river they pluck and chew some grass, and each man says to the other, 'Shall I throw the river (water)? Shall I cross the river?' Then they go down to the bank, and each man dips his hand in the river and throws a handful of water away from him thrice. After that they cross the river, each of them with his arm outside of his cloak in the usual way. But if the day is a Tuesday, Friday, or Saturday they will not throw the water, but only chew the grass.

[1] Dudley Kidd, *The Essential Kafir* (London, 1904), p. 10.

[2] J. Macdonald, *Light in Africa*[2] (London, 1890), p. 205. Compare *id.*, in *Journal of the Anthropological Institute*, xx (1891), p. 125.

[3] S. L. and H. Hinde, *The Last of the Masai* (London, 1901), pp. 103 sq.

[4] F. Metz, *The Tribes of the Neilgherry Hills* (Mangalore, 1864), p. 68.

Also, if the funeral ceremonies of a person belonging to the clan of either of the two men are not complete, they will not throw the water. The sacred dairyman (*palol*) of the Todas may not cross either of the holy rivers at the places used by common folk. In the old days there were certain fords where ordinary people waded through the water, but the dairyman had a ford of his own. Nowadays the Todas cross the Paikara by a bridge, but the holy milkman may not make use of the profane convenience. And in the old days no Toda who had been bitten by a snake might cross any stream whatever.[1] Among the Mahafaly and Sakalava of southern Madagascar certain chiefs are forbidden to cross certain rivers, while others are bound to go and salute all the rivers of the country.[2] In Cayor, a district of Senegal, it is believed that the king would inevitably die within the year if he were to cross a river or an arm of the sea.[3]

Though we may not be able to explain the exact reasons for imposing these various rules and restrictions, the general motive which underlies them is plain enough; it is the awe and fear of rivers conceived as powerful personal beings. That conception is well illustrated by a practice observed by the Kakhyeen of Upper Burma. When one of the tribe has been drowned in crossing a river, the avenger of blood repairs once a year to the banks of the guilty stream, and filling a vessel full of water he hews it through with his sword, as if he were despatching a human foe.[4] The same tendency to personify the spirit of a river, especially a rapid and dangerous river, perhaps explains the weird story of Jacob's adventure at the ford of the Jabbok.

The tradition that a certain sinew in Jacob's thigh was strained in the struggle with his nocturnal adversary is clearly an attempt to explain why the Hebrews would not eat that particular sinew. Both the tradition and the custom have their parallels among some tribes of North American Indians, who regularly cut out and throw away the hamstrings of the deer they kill. Without repeating the evidence on this subject which I have cited elsewhere,[5] I will

[1] W. H. R. Rivers, *The Todas*, pp. 418 sq., 500 sq.

[2] A. Van Gennep, *Tabou et Totémisme à Madagascar* (Paris, 1904), p. 113.

[3] J. B. L. Durand, *Voyage au Sénégal* (Paris, 1802), p. 55.

[4] Clement Williams, *Through Burma to Western China* (Edinburgh and London, 1868), pp. 91 sq.

[5] *The Golden Bough*[2], ii. 419–21.

merely mention two reasons which the Cherokee Indians assign for the practice. One is that 'this tendon, when severed, draws up into the flesh; ergo, any one who should unfortunately partake of the hamstring would find his limbs draw up in the same manner.'[1] The other is that if they did not do so they would easily grow tired in travelling.[2] Both these reasons assume the principle of sympathetic magic, though they apply it differently. The one supposes that, if you eat a sinew which shrinks, the corresponding sinew in your own body will shrink likewise. The other appears to suppose that, if you destroy the sinew without which the deer cannot walk, you yourself will be incapacitated from walking in precisely the same way. Both reasons are thoroughly in keeping with savage philosophy. Either of them would suffice to account for the Hebrew taboo.

§ 5. *The Bundle of Life.*

When David with his men was in hiding for fear of Saul in the dreary wilderness of Judaea[3], he was visited by Abigail, the wise and beautiful wife of the rich sheep-farmer Nabal, whom the gallant outlaw had laid under a deep obligation by not stealing his sheep. Insensible of the services thus rendered to him by the caterans, the surly farmer refused with contumely a request, couched in the most polite terms, which the captain of the band had sent in for the loan of provisions. The insult touched the captain's nice sense of honour to the quick, and he was marching over the hills at the head of four hundred pretty fellows, every man of them with his broadsword buckled at his side, and was making

[1] J. Mooney, 'Sacred formulas of the Cherokees,' *Seventh Annual Report of the Bureau of Ethnology* (Washington, 1891), p. 323.

[2] J. Mooney, 'Myths of the Cherokees,' *Nineteenth Annual Report of the Bureau of American Ethnology* (Washington, 1900), p. 263.

[3] Speaking of the wilderness of Judaea, an eye-witness says: 'The view from the height was most extraordinary; on every side were other ridges equally white, steep, and narrow; their sides were seamed by innumerable torrent-beds, their summits were sharp and ragged in outline. These ridges stood almost isolated, between broad flat valleys of soft white marl scattered with flints, and with a pebbly torrent-course in the middle. There was not a tree visible, scarcely even a thorny shrub; the whole was like the dry basin of a former sea scoured by the rains, and washed down in places to the hard foundation of metamorphic limestone, which underlies the whole district, and forms precipices two thousand feet high over the shores of the Dead Sea.' (C. R. Conder, *Tent-work in Palestine*, ii. 127.)

straight for the farm, when the farmer's wife met him on the moor. She had soft words to soothe the ruffled pride of the angry chieftain, and, better perhaps than words, a train of asses laden with meat and drink for the sharp-set brigands. David was melted. The beauty of the woman, her gentle words, and the sight of the asses with their panniers, all had their effect. He received the wife, pleading for her husband, with the utmost courtesy, promised his protection, not without dark hints of the sight that the sun would have seen at the farm next morning if she had not met him, and so dismissed her with a blessing. The word was given. The outlaws faced to the right-about, and, followed no doubt by the asses, marched off the way they had come. With a lighter heart Abigail hastened to the house where her boorish husband and his hinds, little wotting of what had passed on the hills, were drinking deep and late after the sheep-shearing. That night over the wine she wisely said nothing. But next morning, when he was sober, she told him, and his heart died within him. The shock to his nervous system, or perhaps something stronger, was too much for him. Within ten days he was a dead man, and after a decent interval the widow was over the hills and far away with the captain of the brigands.[1]

Among the compliments which the charming Abigail paid to the susceptible David at their first meeting there is one which deserves our attention. She said: 'And though man be risen up to pursue thee, and to seek thy soul, yet the soul of my lord shall be bound in the bundle of life with the Lord thy God; and the souls of thine enemies, them shall he sling out, as from the hollow of a sling.'[2] No doubt the language is metaphorical, but to an English reader the metaphor is strange and obscure. It implies that the souls of living people could be tied up for safety in a bundle, and that on the contrary, when the souls were those of enemies, the bundle might be undone and the souls scattered to the winds. I think we may safely say that such an idea could hardly have occurred to a Hebrew even as a figure of speech, unless he were familiar with an actual belief that souls could thus be

[1] 1 Samuel xxv. 1–37.

[2] 1 Samuel xxv. 29. The same expression 'bundle of life' (צרור חיים) is applied to a faithful friend in the Hebrew text of Ecclesiasticus, vi. 16, where צְרוֹר ('bundle') ought not, with some editors, to be changed into צֳרִי ('balm'). See Professor A. A. Bevan, in *Journal of Theological Studies*, October, 1899, p. 140.

treated. To us who conceive of a soul as immanent in its body so long as life lasts the idea conveyed by the verse in question is naturally preposterous. But it would not be so to many peoples whose theory of life differs widely from ours. There is in fact a widespread belief among savages that the soul can be, and often is, extracted from the body during the lifetime of its owner without immediately causing his death. Commonly this is done by ghosts, demons, or evil-disposed persons who have a grudge at a man and steal his soul for the purpose of killing him; for if they succeed in their fell intent and detain the truant soul long enough the man will fall ill and die.[1] For that reason people who identify their souls with their shades or reflections are often in mortal terror of a camera, because they think that the photographer who has taken their likeness has abstracted their souls or shades along with it. To take a single instance out of a multitude. At a village on the lower Yukon River in Alaska an explorer had set up his camera to get a picture of the Esquimaux as they were moving about among their houses. While he was focussing the instrument, the headman of the village came up and insisted on peeping under the cloth. Being allowed to do so he gazed agog for a minute at the moving figures on the ground-glass; then jerking his head from under the cloth he bellowed out to his people, 'He has got all your shades in this box.' A panic ensued among the group, and in a twinkling they disappeared helter-skelter into their houses.[2] On this theory a camera or a packet of photographs is a box or bundle of souls packed ready for transport like sardines in a tin.

But sometimes souls are extracted from their bodies with a kindly intention. The savage seems to think that nobody can die properly unless his soul is in his body just before he expires, since it is the final departure of the soul which is the true cause of death. From this again he infers that if you can only draw out the soul and keep it in safe custody the man in the meantime is for all practical purposes immortal, since in the absence of his soul there is really nothing in him to die. Hence in time of danger the wary savage will sometimes carefully extract his own soul or the soul of a friend and leave it, so to say, at deposit account in some safe

[1] *The Golden Bough*[2], ii. 263 sqq.; A. C. Kruijt, *Het animisme in den Indischen Archipel* (The Hague, 1906), pp. 77 sqq.

[2] E. W. Nelson, 'The Eskimo about Behring Strait,' *Eighteenth Annual Report of the Bureau of American Ethnology*, part i (Washington, 1899), p. 422.

place till the danger is past and he can reclaim his spiritual property. For example, many people regard the removal to a new house as a crisis fraught with peril to their souls; hence in Minahassa, a district of Celebes, at such critical times the priest collects the souls of the whole family in a bag and keeps them there till the danger is over, when he restores them to their respective owners.[1] Again, in Southern Celebes, when a woman's time is near, the messenger who goes to fetch the doctor or midwife takes with him a chopping-knife or something else made of iron. The thing, whatever it is, represents the woman's soul, which at this dangerous time is believed to be safer outside of her body than in it. Hence the doctor must take great care of the thing, for were it lost the woman's soul would with it be lost also. So he keeps it in his house till the confinement is over, when he gives back the precious object in return for a fee.[2] In the Key Islands a hollowed-out cocoa-nut, split in two and carefully pieced together, may sometimes be seen hanging up. This is a receptacle in which the soul of a newly-born infant is kept lest it should fall a prey to demons. For in those parts the soul does not permanently lodge in its tabernacle of clay, until the clay has taken a firm consistency. The Esquimaux of Alaska adopt a similar precaution for the soul of a sick child. The medicine-man conjures it into an amulet and then stows the amulet in his medicine-bag, where, if anywhere, the soul should be out of harm's way.[3]

But perhaps the closest analogy to the 'bundle of life' is furnished by the bundles of *churinga*, that is, flattened and elongated stones and sticks, which the Arunta and other tribes of Central Australia keep with the greatest care and secrecy in caves and crevices of the rocks. Each of these mysterious stones or sticks is intimately associated with the spirit of a member of the clan, living or dead; for as soon as the spirit of a child enters into a woman to be born, one of these holy sticks or stones is dropped on the spot where the mother felt her womb quickened. Directed by her, the father

[1] P. N. Wilken, 'Bijdragen tot de kennis van de zeden en gewoonten der Alfoeren in de Minahassa,' *Mededeelingen van wege het Nederlandsche Zendelinggenootschap*, vii (1863), pp. 146 sq.

[2] B. F. Matthes, *Bijdragen tot de Ethnologie van Zuid-Celebes* (The Hague, 1875), p. 54.

[3] J. A. Jacobsen, *Reisen in die Inselwelt des Banda-Meeres* (Berlin, 1896), p. 199.

searches for the stick or stone of his child, and having found it, or carved it out of the nearest hard-wood tree, he delivers it to the headman of the district, who deposits it with the rest in the sacred store-house among the rocks. These precious sticks and stones, closely bound up with the spirits of all the members of the clan, are often carefully tied up in bundles. They constitute the most sacred possession of the tribe, and the places where they are deposited are skilfully screened from observation, the entrances to the caves being blocked up with stones arranged so naturally as to disarm suspicion. Not only the spot itself but its surroundings are sacred. The plants and trees that grow there are never touched: the wild animals that find their way thither are never molested. And if a man fleeing from his enemies or from the avenger of blood succeeds in reaching the sanctuary, he is safe so long as he remains within its bounds. The loss of their *churinga*, as they call the sacred sticks and stones thus associated with the spirits of all the living and all the dead members of the community, is the most serious evil that can befall a tribe. Robbed of them by inconsiderate white men, the natives have been known to stay in camp for a fortnight, weeping and wailing over their loss and plastering their bodies with white pipeclay, the emblem of mourning for the dead.[1]

In these beliefs and practices of the Central Australians with regard to the *churinga* we have, as Messrs. Spencer and Gillen justly observe, 'a modification of the idea which finds expression in the folklore of so many peoples, and according to which primitive man, regarding his soul as a concrete object, imagines that he can place it in some secure spot apart, if needs be, from his body, and thus, if the latter be in any way destroyed, the spirit part of him still persists unharmed.'[2] Not that the Arunta of the present day believe these sacred sticks and stones to be the actual receptacles of their spirits in the sense that the destruction of one of the sticks or stones would of necessity involve the destruction of the man, woman, or child whose spirit is associated with it. But in their traditions we meet with clear traces of a belief that their ancestors did really deposit their spirits in these sacred objects. For example, we are told that some men of the Wild Cat totem kept their spirits in their *churinga*, which they used to hang up on a sacred pole in the camp when they

[1] Spencer and Gillen, *The Native Tribes of Central Australia*, pp. 128–36. Compare *id.*, *The Northern Tribes of Central Australia*, pp. 257–82.

[2] Spencer and Gillen, *Native Tribes of Central Australia*, p. 137.

went out to hunt; and on their return from the chase they would take down the *churinga* from the pole and carry them about as before.[1] The intention of thus hanging up the *churinga* on a pole when they went out hunting may have been to put their souls in safe-keeping till they came back.

Thus there is fair ground to think that the bundles of sacred sticks and stones, which are still treasured so carefully in secret places by the Arunta and other tribes of Central Australia, were formerly believed to house the souls of every member of the community. So long as these bundles remained securely tied up in the sanctuary, so long, might it be thought, was it well with the souls of all the people; but once open the bundles and scatter their precious contents to the winds, and the most fatal consequences would follow. It would be rash to assert that the primitive Semites ever kept their souls for safety in sticks and stones which they deposited in caves and crannies of their native wilderness; but it is not rash to affirm that some such practice would explain in an easy and natural way the words of Abigail to the hunted outlaw: 'And though man be risen up to pursue thee, and to seek thy soul, yet the soul of my lord shall be bound in the bundle of life with the Lord thy God; and the souls of thine enemies, them shall he sling out, as from the hollow of a sling.'

Thus I infer that the Hebrews retained down to historical times the conception of an external soul, that is, a belief in the possibility of depositing the soul for safety in some secure place outside of the body. The inference is confirmed by a remarkable expression of Isaiah. In a long list of feminine ornaments he mentions 'houses of the soul'.[2] The expression thus literally translated is unique in the Old Testament. Modern translators and commentators, following Jerome, render it 'perfume boxes', 'scent-bottles', or the like.[3] But it may well be that these 'houses of the soul' were amulets in which the soul of the wearer was supposed to lodge.[4] The commentators on

[1] Spencer and Gillen, *op. cit.*, p. 138.

[2] Isaiah iii. 20 בָּתֵּי הַנֶּפֶשׁ.

[3] 'Perfume boxes' (Revised Version). Similarly Kautsch, Dillmann, Duhm, Skinner, Whitehouse. Jerome's rendering in the Vulgate is *olfactoriola*.

[4] The Egyptians placed little models of houses, made of pottery, on the tombs for the souls of the dead to lodge in. Many of these miniature houses of the soul have lately been discovered by Professor W. M. Flinders Petrie at Rifeh, in Upper Egypt. See W. M. Flinders Petrie, *Gizeh and Rifeh* (London, 1907), pp. 14–20, with plates I, XV–XXII. The hut-urns containing the ashes of the dead which

the passage recognize that many of the trinkets in the prophet's list were probably charms, just as personal ornaments often are in the East to the present day.[1] The very word which follows 'houses of the soul' in the text is rendered 'amulets' in the Revised Version; it is derived from a verb meaning 'to whisper', 'to charm'.[2]

But the view of these 'houses of the soul' which I have suggested does not necessarily exclude their identification with scent-bottles. In the eyes of a people who, like the Hebrews[3], identified the principle of life with the breath, the mere act of smelling a perfume might easily assume a spiritual aspect; the scented breath inhaled might seem an accession of life, an addition made to the essence of the soul. Hence it would be natural to regard the fragrant object itself, whether a scent-bottle, incense, or a flower, as a centre of radiant spiritual energy, and therefore as a fitting place into which to breathe out the soul whenever for any reason it seemed desirable to do so for a time. Far-fetched as this idea may appear to us, it may seem natural enough to the folk and to their best interpreters the poets:

I sent thee late a rosy wreath,
Not so much honouring thee
As giving it a hope that there
It could not wither'd be;

have been found in ancient Italian, German, and Danish graves, were probably in like manner intended to serve as houses of the soul. See W. Helbig, *Die Italiker in der Poebene*, p. 50; O. Schrader, *Reallexikon der Indogermanischen Altertumskunde*, pp. 337, 339.

[1] Dillmann, Skinner, and Whitehouse, on Isaiah iii. 18 and 20. Compare B. Winer, *Biblisches Realwörterbuch*[3], s. v. 'Amulete'. The peoples of the eastern horn of Africa (the Somali, Gallas and Danakil), especially the Mohammedan part of them, wear many ornaments which, at the same time, serve as amulets. See Ph. Paulitschke, *Ethnographie Nordost-Afrikas, Die materielle Cultur der Danâkil, Galla, und Somâl* (Berlin, 1893), pp. 95 sq. Compare F. Stuhlmann, *Mit Emin Pascha ins Herz von Afrika* (Berlin, 1894), p. 518. On the relation of jewellery to magic, see Professor W. Ridgeway, in *Report of the British Association, Meeting held at Southport*, 1903, pp. 815 sq.

[2] Brown, Driver, and Briggs, *Hebrew and English Lexicon of the Old Testament*, p. 538. Similarly Kautsch, in his German translation of the Bible, and Dillmann and Skinner in their commentaries on Isaiah. In another passage (xxvi. 16) Isaiah uses the same word (לַחַשׁ) in the phrase 'compulsion of a spell' (where we must read צָקוֹן for צָקוֹן with many critics; see Brown, Driver, and Briggs, *op. cit.*, pp. 538, 848).

[3] Genesis ii. 7.

But thou thereon didst only breathe
And sent'st it back to me;
Since when it grows, and smells, I swear,
Not of itself but thee! [1]

Or again:

Ihr verblühet, süsse Rosen,
Meine Liebe trug euch nicht.

But if beauty can thus be thought to give of her life, her soul, to the soul of the rose to keep it fadeless, it is not extravagant to suppose that she can breathe her soul also into her scent-bottle. At all events these old-world fancies, if such indeed they are, would explain very naturally why a scent-bottle should be called a 'house of the soul'. But the folk-lore of scents has yet to be studied. In investigating it, as every other branch of folk-lore, the student may learn much from the poets, who perceive by intuition what most of us have to learn by a laborious collection of facts. Indeed without some touch of poetic fancy it is hardly possible to enter into the heart of the people. A frigid rationalist will knock in vain at the magic rose-wreathed portal of fairyland. The porter will not open to Mr. Gradgrind.

[1] 'Jonson's learned sock' was on when he wrote these beautiful verses. See Philostratus, *Epist.* 2: Πέπομφά σοι στέφανον ῥόδων, οὐ σὲ τιμῶν, καὶ τοῦτο μὲν γάρ, ἀλλ' αὐτοῖς τι χαριζόμενος τοῖς ῥόδοις, ἵνα μὴ μαρανθῇ. And again *Epist.* 46: Εὖ πεποίηκας στρωμνῇ χρησάμενος τοῖς ῥόδοις· . . . εἰ δὲ βούλει τι φίλῳ χαρίζεσθαι, τὰ λείψανα αὐτῶν ἀντίπεμψον μηκέτι πνέοντα ῥόδων μόνον, ἀλλὰ καὶ σοῦ. And the thought of the first stanza of the same song:

Drink to me only with thine eyes,
And I will pledge with mine;
Or leave a kiss but in the cup
And I'll not look for wine,

is also borrowed from the same elegant writer. See Philostratus, *Epist.* 33: Ἐμοὶ δε μόνοις πρόπινε τοῖς ὄμμασιν . . . εἰ δὲ βούλει, τὸν μὲν οἶνον μὴ παραπόλλυε, μόνου δ' ἐμβαλοῦσα ὕδατος καὶ τοῖς χείλεσι προσφέρουσα πλήρου φιλημάτων τὸ ἔκπωμα καὶ οὕτως δίδου τοῖς δεομένοις. Elsewhere Philostratus, whose fancy, like that of Herrick, seems to have run much on love and roses, plays on the same thoughts (*Epist.* 60 and 63). Another passage in his letters (*Epist.* 55, μαραίνεται καὶ γυνὴ μετὰ ῥόδων, ἂν βραδύνῃ. Μὴ μέλλε, ὦ καλή· συμπαίξωμεν, στεφανωσώμεθα τοῖς ῥόδοις, ξυνδράμωμεν) might have served as a text to Herrick's

Gather ye rose-buds while ye may.

But without doubt the English poet drew his inspiration from living roses in English gardens and English hedges, not from dead Greek roses in the dusty pages of Philostratus.

§ 6. *Not to seethe a kid in its mother's milk.*

A modern reader is naturally startled when among the solemn commandments professedly given by God to ancient Israel he finds the precept: 'Thou shalt not seethe a kid in its mother's milk.'[1] And his surprise is not lessened but greatly increased by an attentive study of one of the three passages in which the command is recorded; for the context of the passage seems to show, as some eminent critics from Goethe downwards have pointed out, that the injunction not to seethe a kid in its mother's milk was actually one of the original Ten Commandments.[2] The passage in question occurs in the thirty-fourth chapter of Exodus. In this chapter we read an account of what purports to be the second revelation to Moses of the Ten Commandments, after that in his anger at the idolatry of the Israelites he had broken the tables of stone on which the first version of the commandments was written. What is professedly given us in the chapter is therefore a second edition of the Ten Commandments. That this is so appears to be put beyond the reach of doubt by the verses which introduce and which follow the list of commandments. Thus the chapter begins: 'And the Lord said unto Moses, Hew thee two tables of stone like unto the first: and I will write upon the tables the words that were on the first tables, which thou brakest.'[3] Then follows an account of God's interview with Moses on Mount Sinai and of the second revelation of the commandments. And at the close of the passage we read: 'And the Lord said unto Moses, Write thou these words: for after the tenor of these words I have made a covenant with thee and with Israel. And he was there with the Lord forty days and forty nights; he did neither eat bread, nor drink water. And he wrote upon the tables the words of the covenant, the ten commandments.'[4] Thus unquestionably the writer of the chapter regarded the commandments given in it as the Ten Commandments.

But here a difficulty arises; for the commandments recorded in

[1] Exodus xxiii. 19, xxxiv. 26; Deuteronomy xiv. 21.

[2] Professor Wellhausen reached this conclusion independently before he found that he had been anticipated by Goethe. See J. Wellhausen, *Die Composition des Hexateuchs und der historischen Bücher des Alten Testaments*[2] (Berlin, 1889), pp. 86 sqq., 327–33; K. Budde, *Geschichte der althebräischen Litteratur* (Leipsic, 1906), pp. 94–6.

[3] Exodus xxxiv. 1.

[4] Exodus xxxiv. 27, 28.

this chapter agree only in part with the commandments contained in the far more familiar version of the Decalogue which we read in the twentieth chapter of Exodus and again in the fifth chapter of Deuteronomy. Moreover, in that second version of the Decalogue, with which we are here concerned, the commandments are not given with the brevity and precision which characterize the first version, so that it is less easy to define them exactly. Accordingly critics have differed as to some details in their enumeration of the precepts. The following is the enumeration given by Professor Budde in his recent *History of Ancient Hebrew Literature*[1]:

1. Thou shalt worship no other god.
2. Thou shalt make thee no molten gods.
3. All the firstborn are mine.
4. Six days thou shalt work, but on the seventh day thou shalt rest.
5. The feast of unleavened bread shalt thou keep in the month when the corn is in ear.[2]
6. Thou shalt observe the feast of weeks, even of the firstfruits of wheat harvest, and the feast of ingathering at the year's end.
7. Thou shalt not offer the blood of my sacrifice with leavened bread.
8. The fat of my feast shall not remain all night until the morning.[3]
9. The first of the firstfruits of thy ground thou shalt bring unto the house of the Lord thy God.
10. Thou shalt not seethe a kid in its mother's milk.

The difference between this version of the Decalogue and the one with which we are familiar will at once strike the reader. Here morality is totally absent. The commandments without exception refer purely to matters of ritual. They are religious in the strict sense of the word, for they define with scrupulous, almost niggling, precision the proper relation of man to God. But of the relations of man to man, not a word. The attitude of God to man in these commandments is like that of a feudal lord to his vassals.

[1] K. Budde, *Geschichte der althebräischen Litteratur*, p. 95.

[2] This commandment does not appear in Exodus xxxiv, but it occurs in the parallel version of the Decalogue in Exodus xxiii. 15.

[3] The version of the commandment given in Exodus xxiii. 18 is here preferred to the different version in the parallel passage Exodus xxxiv. 25: 'Neither shall the sacrifice of the feast of the passover be left unto the morning.'

He stipulates that they shall render him his dues to the utmost farthing, but what they do to each other, so long as they do not interfere with the payment of his feu duties, is no concern of his. How different from the six concluding commandments of the other version: 'Thou shalt honour thy father and mother; thou shalt do no murder; thou shalt not commit adultery; thou shalt not steal; thou shalt not bear false witness against thy neighbour; thou shalt not covet thy neighbour's house, thou shalt not covet thy neighbour's wife, nor his manservant, nor his maidservant, nor his ox, nor his ass, nor anything that is thy neighbour's.'[1]

If we ask which of these two discrepant versions of the Decalogue is the older, the answer cannot be doubtful. It would happily be contrary to all analogy to suppose that precepts of morality, which had originally formed part of an ancient code, were afterwards struck out of it to make room for precepts concerned with mere points of ritual. Is it credible that, for example, the command, 'Thou shalt not steal,' was afterwards omitted from the code and its place taken by the command, 'The fat of my feast shall not remain all night until the morning'? or that the command, 'Thou shalt do no murder,' was ousted by the command, 'Thou shalt not seethe a kid in its mother's milk'? The whole course of human history refutes the supposition. All probability is in favour of the view that the moral version of the Decalogue, if we may call it so from its predominant element, was later than the ritual version, because the general trend of civilization has been, still is, and we hope always will be, towards insisting on the superiority of morality to ritual. It was this insistence which lent force to the teaching, first, of the Hebrew prophets, and afterwards of Christ himself. We should probably not be far wrong in surmising that the change from the ritual to the moral Decalogue was carried out under prophetic influence.[2]

[1] Exodus xx. 12–17.

[2] In assuming the ritual version of the Decalogue (Exodus xxxiv) to be older than the moral version, I agree with Professors Wellhausen and Budde (*ll. cc.*). But in estimating the comparative age of the two versions I purposely leave out of account the difference of the two documents (the Jehovistic and the Elohistic) in which they are found, because critics are not agreed as to the relative age of these two documents. If, however, some of the best critics (including Kuenen, Wellhausen, Stade, and Driver) are right in assigning the priority to the Jehovistic document, this would be another argument in favour of the earlier date of the ritual Decalogue (Exodus xxxiv), since it is Jehovistic; whereas the moral Decalogue

But if we may safely assume, as I think we may, that the ritual version of the Decalogue is the older of the two, we have still to ask why was the precept not to seethe a kid in its mother's milk deemed of such vital importance that it was assigned a place in the primitive code of the Hebrews, while precepts which seem to us infinitely more important, such as the prohibitions of murder, theft, and adultery, were excluded from it?[1] To suppose with some commentators, ancient and modern, that the precept is one of refined humanity[2] is in the highest degree improbable. A legislator who, so far as appears from the rest of the primitive Decalogue, paid no attention to the feelings of human beings was not likely to pay much to the maternal feelings of goats. It is far more probable that the command was based on some superstitious belief current among a rude pastoral people who depended for their subsistence chiefly on their flocks of goats.

Now among pastoral tribes in Africa at the present day there appears to be a widely spread and deeply rooted aversion to boil the milk of their cattle, the aversion being based on an idea that a cow whose milk has been boiled will yield no more milk, and that the animal may even die of the injury thereby done to it. To take examples. The milk and butter of cows form a large part of the diet of the Mohammedan natives of Sierra Leone and the neighbourhood; but 'they never boil the milk, for fear of causing the cow to become dry, nor will they sell milk to any one who should practise it. The Bulloms entertain a similar prejudice respecting oranges, and will not sell them to those who throw the skins into the fire, "lest it occasion the unripe fruit to fall off."'[3] Thus it appears that the objection to boil milk is based on the principle of sympathetic magic. Even after the milk has been drawn from the cow it is supposed to remain in such vital connexion with the animal that

(Exodus xx) is Elohistic. See S. R. Driver, *Introduction to the Literature of the Old Testament*[5], pp. 29 sq., 116; *id.*, *The Book of Genesis*[4], p. xvi; J. Estlin Carpenter and G. Harford Battersby, *The Hexateuch* (London, 1900), i. 276, ii. 111.

[1] Robertson Smith thought that the command not to seethe a kid in its mother's milk was directed against a form of heathen sacrifice (*Religion of the Semites*[2], p. 221 note). But he adduces no example of such a sacrifice, nor do I remember to have met with any in my reading.

[2] See A. Dillmann's commentary on Exodus xxiii. 19.

[3] Th. Winterbottom, *An Account of the Native Africans in the neighbourhood of Sierra Leone* (London, 1803), pp. 69 sq.

any injury done to the milk will be sympathetically felt by the cow. Hence to boil the milk in a pot is like boiling it in the cow's udders; it is to dry up the fluid at its source.

On the opposite side of Africa we meet with the same superstition among pastoral peoples. When Speke and Grant were on their memorable journey from Zanzibar to the source of the Nile, they passed through the district of Ukuni, which lies to the south of the Victoria Nyanza. The king of the country lived at the village of Nunda and 'owned three hundred milch cows, yet every day there was a difficulty about purchasing milk, and we were obliged to boil it that it might keep, for fear we should have none the following day. This practice the natives objected to, saying, "The cows will stop their milk if you do so."'[1] Among the Waganda the same rule is stringently observed, and for the same reason.[2] Similarly the Bahima, a pastoral people of Enkole in the Uganda Protectorate, strictly abstain from boiling milk. They believe that to boil it would cause the cows to fall ill and die.[3] They even say that 'if a European puts his milk into tea it will kill the cow which gave the milk. Also the Bairo, who eat sweet potatoes and ground-nuts, are not allowed to drink milk, as it would then injure the cattle; so in the old days before rupees and kauri-shells were introduced butter was a common currency, but they could not sell the milk itself for fear that it might be drunk by some one who was forbidden to drink it.'[4] In like manner the Masai, who are, or used to be, a purely pastoral people, regard the boiling of milk as a crime which they would neither commit themselves nor allow others to commit.[5] The reason for their aversion to the practice is not given, but in the light of the foregoing evidence we may safely assume that they fear to injure or kill the cows by boiling their milk. The same prohibition

[1] J. A. Grant, *A Walk across Africa* (Edinburgh and London, 1864), p. 89.

[2] This I learn from my friend the Rev. J. Roscoe, for many years a missionary in Uganda.

[3] J. Roscoe, 'The Bahima, a cow tribe of Enkole, in the Uganda Protectorate,' *Journal of the Anthropological Institute*, xxxvii. 111 (1907).

[4] Major Meldon, 'Notes on the Bahima of Ankole,' *Journal of the African Society*, No. xxii, January, 1907, p. 142.

[5] P. Reichard, *Deutsch-Ostafrika* (Leipsic, 1892), pp. 287 sq. However, milk mixed with blood and heated is given by them to the wounded. But this practice is said to have been borrowed from outside. See O. Baumann, *Durch Massailand zur Nilquelle* (Berlin, 1894), p. 162. Compare M. Merker, *Die Masai* (Berlin, 1904), p. 32.

to boil milk is observed also by the Wagogo, the Wamegi, and the Wahumba, three tribes of German East Africa.[1]

A similar fear of tampering with the principal source of subsistence may well have dictated the old Hebrew commandment: 'Thou shalt not seethe a kid in its mother's milk.' On this theory an objection will be felt to seething or boiling a kid in any milk, because the she-goat from which the milk had been drawn would be injured by the process, whether she was the dam of the kid or not. The reason why the mother's milk is specially mentioned rather than milk in general may have been either because as a matter of convenience the mother's milk was more likely to be used than any other for that purpose, or because the injury to the she-goat in such a case was deemed to be even more certain than in any other. For being linked to the contents of the boiling pot by a double bond of sympathy, since the kid, as well as the milk, had come from her bowels, the mother goat was twice as likely as any other goat to lose her milk or to be killed outright by the heat and ebullition.

But it may be said: If the objection was simply to the boiling of milk, why is the kid mentioned at all in the commandment? The practice, if not the theory, of the Baganda seems to supply the answer. Among these people it is recognized that flesh boiled in milk is a great dainty, and naughty boys and other unprincipled persons, who think more of their own pleasure than of the welfare of the herds, will gratify their sinful lusts by eating meat boiled in milk, whenever they can do so on the sly,[2] heedless of the sufferings which their illicit banquet inflicts on the poor cows and goats. Thus the Hebrew command 'Thou shalt not seethe a kid in its mother's milk' was probably directed against miscreants of this sort, whose surreptitious joys were condemned by public opinion as striking a fatal blow at the staple food of the community. We can therefore understand why in the eyes of a primitive pastoral people the boiling of milk should seem a blacker crime than robbery and

[1] This I learn from my friend the Rev. J. Roscoe, whose information is based on personal contact with all three tribes. However, the prohibition to boil milk is not universal among pastoral people. Thus among the Wataturu of East Africa, who used to live mainly on flesh and milk, the practice of boiling milk was always quite common. See O. Baumann, *Durch Massailand zur Nilquelle* (Berlin, 1894), p. 171. And the modern Bedouin of Arabia seem to boil milk without scruple. See J. L. Burckhardt, *Notes on the Bedouin and Wahabys*, i. 63; C. M. Doughty, *Travels in Arabia Deserta*, ii. 67.

[2] So I am told by my friend the Rev. J. Roscoe.

murder. For whereas robbery and murder harm only individuals, the boiling of milk, like the poisoning of wells, seems to threaten the existence of the whole tribe by cutting off its principal source of nourishment. That may be why in the first edition of the Hebrew Decalogue we miss the commandments 'Thou shalt not steal' and 'Thou shalt do no murder', and find instead the commandment 'Thou shalt not boil milk.'

The conception of a sympathetic bond between an animal and the milk that has been drawn from it appears to explain certain other rules observed by pastoral peoples, for some of which no sufficient explanation has yet been suggested. Thus milk is the staple food of the Damaras or Hereros of south-western Africa, but they never cleanse the milk-vessels out of which they drink or eat, because they believe that were they to wash out the vessels the cows would cease to give milk.[1] Apparently their notion is that to wash out the lees of the milk from the pot would be to wash out the dregs of the milk from the cow's udders.

Again, it is a rule with the Caffre tribes of South Africa and with the Bahima of Enkole that menstruous women may not drink milk; and the reasons assigned for the rule prove that the idea on which it rests is the supposed sympathy between the milk and the animal. Thus among the Bahima a woman at her monthly periods must eat vegetables and drink beer; for it is thought that if she drank milk she would thereby injure the cows. But an exception is made in favour of a girl at her first menstruation; her father sets apart for her use an old cow, the milk of which is her only food.[2] The exception is significant. An old cow will soon lose her milk in any case, so it does not signify much if she loses it a little sooner through the pollution of her milk by the menstruous girl. The Caffres of South Africa believe that the cows would die if a menstruous woman tasted their milk.[3] Even the maidens who attend

[1] C. J. Andersson, *Lake Ngami*[2], p. 230; J. Hahn, 'Die Ovaherero,' *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, iv (1869), p. 250.

[2] J. Roscoe, 'The Bahima, a cow tribe of Enkole in the Uganda Protectorate,' *Journal of the Anthropological Institute*, xxxvii. 107 (1907).

[3] J. Macdonald, 'Manners, customs, superstitions and religions of South African tribes,' *Journal of the Anthropological Institute*, xx (1891), p. 138; *id.*, *Light in Africa*[2], p. 221. Compare L. Alberti, *De Kaffers* (Amsterdam, 1810), pp. 102 sq. For a similar reason, probably, among the Bacas of South Africa a woman at menstruation is not allowed to see or touch cow's dung (J. Macdonald, in *Journal of the Anthropological Institute*, xx (1891), p. 119).

a girl at her first menstruation are forbidden to drink milk, lest the cattle should die; the period of seclusion and taboo lasts a fortnight.[1] If a Caffre woman infringes this custom at one of her periods her husband may be fined from one to three head of cattle, which are paid to the chief. Formerly this monthly period of abstinence from milk lasted for seven or eight days.[2] Further, among the Caffres menstruous women are forbidden to cross those parts of the kraal which are frequented by the cattle; for if a drop of their blood were to fall on such a path 'any oxen passing over it would run great risk of dying from disease'. Hence women have to make circuitous paths from one hut to another, going round the back of the huts in order to avoid the forbidden ground. The tracks which they use may be seen at every kraal. But there is no such restriction on the walks of women who are past child-bearing, because they have ceased to be a source of danger.[3]

The disabilities thus imposed on women at menstruation are perhaps dictated by a fear lest the cows whose milk they drank should yield milk mingled with blood. Such a fear, Mr. Roscoe tells me, is much felt by the pastoral tribes of Central Africa. Again, the same idea perhaps explains the Zulu custom which forbids a wounded man to drink milk until he has performed a certain ceremony. Thus when an Englishman serving with the Zulus was wounded in action and bled profusely, a young heifer was killed by order of the medicine-man, and its small entrails, mixed with the gall and some roots, were parboiled and given to the sufferer to drink. At first he refused the nauseous dose, but the medicine-man flew into a passion and said 'that unless I drank of the mixture I could not be permitted to take milk, fearing the cows might die, and if I approached the king I should make him ill'.[4] This fear of injuring the cows through the infection of blood

[1] Dudley Kidd, *The Essential Kafir*, p. 209.

[2] *Compendium of Kafir Laws and Customs* (Cape Town, 1866), p. 122, compare p. 91.

[3] Dudley Kidd, *The Essential Kafir*, pp. 238 sq.; *Compendium of Kafir Laws and Customs*, p. 93. The huts of a Caffre kraal are usually arranged in a circle with the cattle fold in the centre (Dudley Kidd, *op. cit.*, pp. 12 sq.). Hence the women's paths may be supposed to lie outside the circle of the huts, between them and the palisade which sometimes encloses the kraal.

[4] Nathaniel Isaacs, *Travels and Adventures in Eastern Africa* (London, 1836), i. 203–5.

may perhaps explain a Bechuana custom of removing all wounded persons to a distance from their towns and villages.[1]

The same dread probably lies at the root of the stringent rule which among many African tribes, especially of the Bantu family, forbids women to milk the cows and to enter the cattle-fold.[2] But if for some reason a married Caffre woman is obliged to enter a cattle-fold she must bring her husband or her nearest male relative to the gate of the fold; there he lays his spear on the ground with the point inside of the entrance, and the woman walks in on the handle of the weapon. 'This is considered as a passport of entrance, and saves her from punishment: but, even in this case, strict inquiry is made as to the necessity for such an entrance, nor are the men very willing to grant, too frequently, such an indulgence to them.'[3] Amongst the pastoral Todas in southern India the business of milking the cattle is performed by men only, who are invested according to their rank with various degrees of sanctity and have to observe strict rules of ceremonial purity. Toda women take no part in the ritual of the sacred dairy nor in the operations of milking and churning which are there carried on. They may go to the dairy to fetch buttermilk, but they must approach it by an appointed path and stand at an appointed place to receive the milk. Only under very special conditions is a woman or a girl permitted to enter a dairy. Indeed, during the performance

[1] R. Moffat, *Missionary Labours and Scenes in Southern Africa* (London, 1842), p. 465. Dr. Moffat could not ascertain the reason of the custom.

[2] Dudley Kidd, *The Essential Kafir*, p. 238; J. Campbell, *Travels in South Africa, Second Journey* (London, 1822), ii. 213; E. Casalis, *The Basutos*, p. 125; *Compendium of Kafir Laws and Customs*, p. 93; F. Fleming, *Southern Africa* (London, 1856), pp. 214 sq.; *id.*, *Kaffraria* (London, 1853), p. 98; Krantz, *Natur- und Kulturleben der Zulus*, pp. 81 sq.; J. Macdonald, *Light in Africa*[2], p. 221; F. Lichtenstein, *Reisen im Südlichen Afrika*, i. 441; H. Schinz, *Deutsch-Süd-West-Afrika*, p. 296; L. Grout, *Zululand*, p. 111; J. Mackenzie, *Ten Years North of the Orange River*, p. 499; G. Fritsche, *Die Eingeborenen Süd-Afrikas*, pp. 85, 183; *Emin Pasha in Central Africa* (London, 1888), pp. 238, 343; Sir H. H. Johnston, *British Central Africa*, p. 431; C. T. Wilson and R. W. Felkin, *Uganda and the Egyptian Soudan* (London, 1882), i. 164; R. W. Felkin, 'Notes on the Madi or Moru tribe of Central Africa,' *Proceedings of the Royal Society of Edinburgh*, xii. (1882–84), pp. 306 sq.; H. Cole, 'Notes on the Wagogo of German East Africa,' *Journal of the Anthropological Institute*, xxxii (1902), p. 337; W. Munzinger, *Sitten und Recht der Bogos*, pp. 77 sq.; *id.*, *Ostafrikanische Studien*, p. 325. However, it deserves to be noticed that among the Bechuanas, while cows are always milked by men, goats are always milked by women (J. Campbell, *loc. cit.*).

[3] F. Fleming, *Southern Africa*, pp. 214 sq.

of certain ceremonies at the dairy women are obliged to leave the village altogether.[1]

However, this sedulous seclusion of women from cattle is not practised by all pastoral tribes. For instance, the cows are milked by women among the Hottentots, Korannas, and Hereros of South Africa[2], among the Masai of East Africa[3], and among the Dinkas of the Upper Nile.[4] So far indeed are the Namaquas, a Hottentot tribe, from sharing the superstition as to the disastrous influence of menstruous women on milk and cattle that among them, when a girl attains to puberty, she is led round the village to touch the milk-vessels in the houses and the rams in the folds for good luck.[5] With this custom we may compare a practice of the Hereros. Among them the fresh milk of the cows is brought by the women to the chief or the owner of the kraal, at the sacred hearth or sacrificial altar, and he tastes and thereby hallows the milk before it may be converted into curds. But if there happens to be a lying-in woman in the kraal, all the fresh milk is taken to her, and she consecrates it in like manner instead of the chief.[6] Among the Bedouin of Arabia the milch camels are milked by men and lads only, but the sheep and goats are milked by women.[7] Among the Calmucks of Siberia it is the business of the women to milk the cattle,[8] and among the Lapps the reindeer are milked by men and women indifferently.[9]

The pollution of death is also with some people a bar to the drinking of milk. Thus, when a death has taken place in a Zulu

[1] W. H. R. Rivers, *The Todas* (London, 1906), pp. 56 sqq., 83 sqq., 231 sqq., especially 245 sq.

[2] P. Kolben, *The Present State of the Cape of Good Hope* (London, 1738), i. 171, 172; J. Mackenzie, *Ten Years North of the Orange River*, p. 499; J. Irle, *Die Herero* (Gütersloh, 1906), p. 121. Among the Hottentots the milk of cows is drunk by both sexes, but the milk of ewes only by women (P. Kolben, *op. cit.*, i. 175).

[3] A. C. Hollis, *The Masai* (Oxford, 1905), p. 290.

[4] *Emin Pasha in Central Africa*, p. 343.

[5] Sir J. E. Alexander, *Expedition of Discovery into the Interior of Africa* (London, 1838), i. 169.

[6] Rev. E. Dannert, 'Customs of the Ovaherero at the birth of a child' (*South African*) *Folk-lore Journal*, ii. 63 sq.; J. Irle, *Die Herero* (Gütersloh, 1906), pp. 79, 94.

[7] C. M. Doughty, *Travels in Arabia Deserta*, i. 261 sq.; J. L. Burckhardt, *Notes on the Bedouins and Wahabys*, i. 239.

[8] P. S. Pallas, *Reise durch verschiedene Provinzen des Russischen Reichs*, i. 314.

[9] J. Scheffer, *Lapponia* (Frankfort, 1673), p. 331.

village, no milk is drunk nor are the cattle allowed to be milked on that day.[1] And with regard to the Caffres of South Africa in general we are told that no person ceremonially unclean may drink milk, and that among such persons are a widow and a widower, the widow being unclean for a month and the widower for half a month after the death of husband or wife respectively.[2] Similarly among the Todas a widower and a widow are forbidden to drink milk for a period which may extend to many months.[3] The reasons for these prohibitions are not given, but in the light of the foregoing evidence we may conjecture that the motive is a fear lest the cows might die if their milk were drunk by a man or woman who was thus deeply tainted with the pollution of death. Yet in apparent contradiction with this fear is the treatment of a widow among the Bechuanas. 'When a woman's husband is dead, she may not enter a town, unless she has been under the hands of a sorcerer. She must remain at some distance from the town; then a little milk from every cow is taken to her, which mixture of milk she must boil with her food. Dung from the cattle pens is also taken to her, and with this, mixed with some *molemo*, she must rub herself. If this ceremony be not gone through, it is thought that all the cattle in the town will surely die.'[4] How these ceremonies are supposed to prevent the cattle from dying, I do not see; but at least it appears that the milk and the dung of the cows are both believed to remain in sympathetic connexion with the animals, since the use of them by the widow is supposed to save the cattle alive. Under certain circumstances maternity as well as death is thought to endanger the herds. In the Nandi tribe of Eastern Uganda, when a woman has given birth to twins, she has to live apart for some months, and may not go near the cattle fold; for if she did, they think that the cattle would die. But one cow is put aside for her, and she drinks its milk.[5] Another curious example of sympathetic magic

[1] A. F. Gardiner, *Narrative of a Journey to the Zoolu Country* (London, 1836), p. 81.

[2] L. Alberti, *De Kaffers aan de Zuidkust van Afrika* (Amsterdam, 1810), pp. 102 sq.

[3] W. H. R. Rivers, *The Todas*, p. 241.

[4] Miss J. P. Meeuwesen, 'Customs and Superstitions among the Betshuana,' (*South African*) *Folk-lore Journal*, i (1879), p. 34. The word *molemo* means both poison and medicine.

[5] C. W. Hobley, *Eastern Uganda* (London, 1902), pp. 39 sq.

applied to the milk of cattle may be mentioned, though it does not fall in with the other instances which I have cited. The Kabyles of North Africa believe that whoever gets possession of the herdsman's staff can conjure the milk of that herd into the udders of his own cows. Hence when he retires to his house in the heat of the day, a herdsman takes care not to let go his staff for a moment. To sell the staff or allow another to get hold of it during the siesta is an offence which is punished with a fine.[1]

Among the Wakamba and Wakikuyu of Central Africa intercourse between the human sexes is forbidden so long as the cattle are at pasture, that is, from the time when the herds are driven out in the morning till the time when they are driven home in the evening.[2] The reason for this prohibition is not mentioned, but we may conjecture that the intercourse of the sexes is supposed to be in some way injurious to the cattle while they are at grass. For a similar reason, perhaps, the most sacred dairymen of the Todas must avoid women altogether.[3] An idea of the same sort may underlie the Caffre custom which restricts the use of fresh milk to young people and very old people; all other persons, that is, all adults in the vigour of life, may only use curdled milk.[4] Among the Bechuanas 'there are two months in the year, at the cow-calving time, which is generally about the month of October, when none but the uncircumcised are permitted to use the milk of cows that have calved'.[5] As the uncircumcised would usually be under puberty, it seems likely that this Bechuana rule is in some way based on the idea that under certain circumstances the intercourse of the human sexes may injuriously affect the cattle. Perhaps the practice of eating milk in the form of sour curds, which prevails

[1] J. Liorel, *Kabylie du Jurjura* (Paris, n. d.), p. 512.

[2] J. M. Hildebrandt, 'Ethnographische Notizen über die Wakamba und ihre Nachbarn,' *Zeitschrift für Ethnologie*, x (1878), p. 401.

[3] W. H. R. Rivers, *The Todas*, p. 236.

[4] J. Shooter, *The Kafirs of Natal and the Zulu country*, p. 28. Similarly Mr. Dudley Kidd writes: 'Sweet milk is but food for babies, and only a few tribes would drink it. But clotted sour milk is food for men' (*The Essential Kafir*, p. 59). 'In the south of Africa it is only the children who drink milk in a sweet state' (E. Casalis, *The Basutos*, p. 145). Again, in the Kikuyu tribe of British East Africa the milk both of cows and goats is much used, but only children drink it fresh (H. R. Tate, 'Further Notes on the Kikuyu tribe,' *Journal of the Anthropological Institute*, xxxiv (1904), p. 259).

[5] J. Campbell, *Travels in South Africa, Second Journey*, ii. 202.

among the pastoral tribes of Africa,[1] may spring not altogether from a preference for curds, nor yet from the difficulty of keeping milk fresh in a hot climate, but partly at least from a superstition that the sympathetic bond between the cow and its milk is weakened or severed when the milk has been turned into curds or buttermilk, and that accordingly you run less risk of sympathetically hurting the cow when you eat curds than when you drink fresh milk. Some such idea at all events would explain why in the cases just cited the drinking of fresh milk is confined to the young and the old, that is, to the classes who are physically unable to endanger the supply of the precious fluid in the manner indicated. The Bahima seem to suppose that the sympathetic bond between the milk and the cow is severed when the milk is converted into butter; for, whereas they will not sell the milk lest it should fall into the hands of persons who would injure the cows by drinking it, they never had any objection to parting with butter.[2] From all this it appears that any process which converts milk into another substance, such as curds, butter, or cheese, may be regarded, though it need not necessarily be regarded, as snapping the link which binds the milk to the cow, and therefore as enabling the milk in its new form to be used by the profane without injury to the cattle.[3]

[1] F. Fleming, *Kaffraria*, pp. 108 sq.; *id.*, *Southern Africa*, pp. 218 sq.; L. Alberti, *De Kaffers aan de Zuidkust van Afrika*, p. 36; H. R. Tate, 'Further Notes on the Kikuyu tribe of British East Africa,' *Journal of the Anthropological Institute*, xxxiv (1904), p. 259; Sir H. H. Johnston, *British Central Africa*, p. 431; Dudley Kidd, *The Essential Kafir*, p. 59; E. Casalis, *The Basutos*, p. 145; E. Dannert, 'Customs of the Ovaherero,' (*South African*) *Folk-lore Journal*, ii. 63; F. Speckmann, *Die Hermannsburger Mission in Afrika* (Hermannsburg, 1876), pp. 107 sq. The process of making the curds is thus described by Mr. Kidd (*loc. cit.*): 'When the milking is over the milk is taken into the hut, and is immediately placed in the milk sac or calabash. This is never cleaned out, but contains a strong ferment which makes the milk clot immediately. . . . The calabash has a small plug at the bottom by which the natives let off the whey, the curds being the only part they care for.' On the other hand, the Masai drink milk both fresh and sour (M. Merker, *Die Masai*, p. 32), and the Bahima drink it only fresh (J. Roscoe, 'The Bahima,' *Journal of the Anthropological Institute*, xxxvii. 100). The Bedouin of Arabia 'drink no whole-milk save that of their camels; of their small cattle they drink but the butter-milk' (C. M. Doughty, *Travels in Arabia Deserta*, i. 325).

[2] See above, p. 155.

[3] When the Wanyamwesi are about to convert milk into butter, they mix it with the urine of cows or of human beings. The reason they gave to Stuhlmann for this practice was that it made the butter more saleable; but he believed,

Among tribes who hold such views the operations of the dairy aim, so to say, at disenchanting the milk for the benefit of the cow, at breaking the tie which binds the two together lest it should drag the animal down to death.

Lastly, the supposed sympathetic influence of milk on the cow is the reason why the Masai take the utmost pains not to bring milk and flesh into contact with each other; for they imagine that contact between the two would set up a disease in the udders of the cow from which the milk was drawn. Hence it is a rule with them never to keep flesh and milk in the same vessel; different sets of vessels are set apart for the one and the other. For the same reason they seldom can be induced to sell their milk, lest the purchaser should make their cows ill by bringing it into contact with flesh. Hence, too, Masai warriors will not eat flesh and milk on the same day. Their practice is to eat nothing but milk for some days and then nothing but flesh and blood for several days more. But before they pass from the one diet to the other they take a strong purgative in order to make sure that no vestige of the previous food remains in their stomachs; so scrupulous are they not to bring milk into contact with flesh or blood. They think that if they failed to observe this precaution the cows would give less milk. Moreover, even when they do eat flesh and drink blood, they may not do so in the kraal; they must retire to a lonely place in the forest, there to kill a bullock and gorge themselves on its flesh and blood. The reason for this particular rule may perhaps be, either wholly or in part, a delicate wish to spare their cattle the pain of witnessing the slaughter and consumption of their fellows. Further, the use of game, and especially of corn of all sorts, is strictly forbidden to the Masai warrior; if he ate corn he would get no wife. Besides flesh, blood, and milk the warriors may eat only honey and sugar-cane.[1] The reason for

probably with justice, that the real motive was a fear that the cows would lose their milk if this procedure were not followed. The Wanyamwesi do not eat the milk thus polluted; they only use it to smear on their persons. See F. Stuhlmann, *Mit Emin Pascha ins Herz von Afrika*, pp. 78 sq.

[1] J. Thomson, *Through Masai Land* (London, 1885), pp. 429–31; P. Reichard, *Deutsch-Ostafrika* (Leipsic, 1892), pp. 287 sq.; O. Baumann, *Durch Massailand zur Nilquelle* (Berlin, 1894), pp. 161 sq.; M. Merker, *Die Masai* (Berlin, 1904), p. 33. Only the last of these writers mentions the supposed sympathetic connexion of the milk with the cows as the reason for the taboo. Among the Wataturu of East Africa any man who ate of a certain species of antelope (called in Swahili *ponu*) was formerly forbidden to drink milk on the same day (O. Baumann, *op. cit.*, p. 171).

the embargo thus laid on game and corn is not mentioned; but on the analogy of the former taboo we may surmise that the motive is a fear of injuring the cows in some way by bringing their milk into contact with these viands.

Similar, though somewhat less stringent, rules as to the separation of flesh and milk are observed by the Israelites to this day. A Jew who has eaten flesh or broth ought not to taste cheese or anything made of milk for an hour afterwards; straitlaced people extend the period of abstinence to six hours. Moreover, flesh and milk are carefully kept apart. There are separate sets of vessels for them, each bearing a special mark, and a vessel used to hold milk must not be used to hold flesh. Two sets of knives are also kept, one for cutting flesh, the other for cutting cheese and fish. Moreover, flesh and milk are not cooked in the oven together nor placed on the table at the same time; even the table-cloths on which they are set ought to be different. If a family is too poor to have two table-cloths, they should at least wash their solitary table-cloth before putting milk on it after meat.[1] These rules, on which Rabbinical subtlety has embroidered a variety of fine distinctions, are professedly derived from the commandment not to seethe a kid in its mother's milk. Taken all together they have probably come down from a time when the forefathers of the Hebrews were goatherds subsisting mainly on the milk of their flocks, and as afraid of diminishing the supply of it as are those pastoral tribes of Africa whose superstitions on that subject the Jews share to this day.

The whole of the rules as to the drinking of milk which have come before us appear to aim at protecting the cows from the harm which an improper use of their milk is supposed to entail on the animals; there seems to be no thought that the wrong act will directly harm the drinker. It is the cows, and not the people, who are the immediate objects of the lawgiver's solicitude, if we may speak of a lawgiver among tribes where custom takes the place of legislation. Hence we may surmise that the elaborate ritual with which, for example, the Todas of southern India have fenced the operations of the dairy was originally designed in like manner for the protection of the cows rather than of the people; the intention, if I am right,

[1] J. Buxtorf, *Synagoga Judaica* (Bâle, 1661), pp. 594-6; J. C. G. Bodenschatz, *Kirchliche Verfassung der heutigen Juden* (Erlangen, 1748), Theil iv. cap. ii. pp. 25 sq.

was not so much to remove a taboo from a sacred fluid for the benefit of the people[1] as to impose a series of restrictions on its use for the benefit of the cattle. The aim of the ritual was, in short, to ensure that the cattle should not be injured sympathetically through the drinking of their milk by improper persons. That the Todas believe such injury to be possible appears from a remark made by a Toda to a missionary. Having ascertained the names of the Toda deities, the missionary was cited to appear before a headman to explain how he had come by the information. 'I told him, that as he had no authority to judge me, I should not answer his question, to which he replied: that I had been drinking the milk of their buffaloes, on which account many of them would die.'[2] This answer seems to imply that the milk of the buffaloes remained in such a sympathetic connexion with the animals that the mere drinking of it by a stranger might cause their death. The implication agrees with the express beliefs of pastoral tribes in Africa.

Surveyed as a whole, the evidence suggests that many rites which have hitherto been interpreted as a worship of cattle may have been in origin, if not always, nothing but a series of precautions, based on the theory of sympathetic magic, for the protection of the herds from the dangers that would threaten them through an indiscriminate use of their milk by everybody, whether clean or unclean, whether friend or foe. The savage who believes that he himself can be magically injured through the secretions of his body naturally applies the same theory to his cattle and takes the same sort of steps to safeguard them as to safeguard himself. If this view is right, the superstitious restrictions imposed on the use of milk which have come before us are analogous to the superstitious precautions which the savage takes with regard to the disposal of his shorn hair, clipped nails, and other severed parts of his person. In their essence they are not religious but magical. Yet in time such taboos might easily receive a religious interpretation and merge into a true worship of cattle. For while the logical distinction between magic and religion is sharp as a knife-edge, there is no such sharp line of cleavage between them historically. With the vagueness characteristic of popular thought the two are constantly fusing with each other, like two streams, one of blue and one of yellow water, which meet and blend into a river that is neither wholly yellow nor wholly blue.

[1] As Dr. Rivers seems to think (*The Todas*, pp. 231 sq.).

[2] F. Metz, *The Tribes inhabiting the Neilgherry Hills* (Mangalore, 1864), p. 43.

But the historical confusion of magic and religion no more dispenses the philosophic student from the need of resolving the compound into its constituent parts than the occurrence of most chemical elements in combination dispenses the chemist from the need of distinguishing them. The mind has its chemistry as well as the body. Its elements may be more subtle and mercurial, yet even here a fine instrument will seize and mark distinctions which might elude a coarser handling.

§ 7. *The Keepers of the Threshold.*

In the temple at Jerusalem there were three officials, apparently priests, who bore the title of Keepers of the Threshold.[1] What precisely was their function? They may have been mere door-keepers, but their title suggests that they were something more; for many curious superstitions have gathered round the threshold in ancient and in modern times. The prophet Zephaniah represents Jehovah himself saying: 'And in that day I will punish all those that leap on the threshold, which fill their master's house with violence and deceit.'[2] From this denunciation it would appear that to jump on a threshold was viewed as a sin which equally with violence and deceit drew down the divine anger on the jumper. At Ashdod the Philistine god Dagon clearly took a similar view of the sinfulness of such jumps, for we read that his priests and worshippers were careful not to tread on the threshold when they

[1] Jeremiah xxxv. 4, lii. 24; 2 Kings xii. 9, xxii. 4, xxiii. 4, xxv. 18. In all these passages the English Version, both Authorized and Revised, wrongly substitutes 'door' for 'threshold'. The number of these officials is mentioned in Jeremiah lii. 24 and 2 Kings xxv. 18. That they were priests seems to follow from 2 Kings xii. 9.

[2] Zephaniah i. 9. The Revised Version wrongly renders 'over the threshold'. The phrase is rightly translated in the Authorized Version. The English Revisers and Kautsch in his German translation of the Bible have done violence to the proper sense of the preposition עַל ('upon'), apparently for the purpose of harmonizing the passage with 1 Samuel v. 5. Professor S. R. Driver also thinks that the prophet is denouncing a heathen practice of jumping *over* the threshold (note on Zephaniah i. 9, in *The Century Bible*), and Professor R. H. Kennett writes to me that he inclines to take the same view. It might be a nice question of casuistry to decide whether a jumper who clears a threshold has committed a more or a less deadly sin than one who lights on the top of it. In either case many people will find it hard to understand the indignation of the Deity on the subject.

entered his temple.[1] The same scruple has persisted in the same regions to this day. Captain Conder tells us of a Syrian belief 'that it is unlucky to tread on a threshold. In all mosques a wooden bar at the door obliges those who enter to stride across the sill, and the same custom is observed in the rustic shrines.'[2] Similarly in Fiji 'to sit on the threshold of a temple is *tabu* to any but a chief of the highest rank. All are careful not to tread on the threshold of a place set apart for the gods; persons of rank stride over; others pass over on their hands and knees. The same form is observed in crossing the threshold of a chief's house. Indeed, there is very little difference between a chief of high rank and one of the second order of deities. The former regards himself very much as a god, and is often spoken of as such by his people, and, on some occasions, claims for himself publicly the right of divinity.'[3] Again, when Marco Polo visited the palace at Peking in the days of the famous Kublai Khan, he found that 'at every door of the hall (or, indeed, wherever the Emperor may be) there stand a couple of big men like giants, one on each side, armed with staves. Their business is to see that no one steps upon the threshold in entering, and if this does happen they strip the offender of his clothes, and he must pay a forfeit to have them back again; or in lieu of taking his clothes they give him a certain number of blows. If they are foreigners ignorant of the order, then there are Barons appointed to introduce them, and explain it to them. They think, in fact, that it brings bad luck if any one touches the threshold. Howbeit, they are not expected to stick at this in going forth again, for at that time some are like to be the worse for liquor and incapable of looking to their steps.'[4] From the account of Friar Odoric, who travelled in the East in the early part of the thirteenth century, it would appear that sometimes these Keepers of the Threshold at Peking gave offenders no choice, but laid on heartily with their staves whenever a man was unlucky enough to

[1] 1 Samuel v. 5.

[2] C. R. Conder, *Heth and Moab* (London, 1883), pp. 293 sq. With regard to the rustic shrines, the supposed tombs of saints (above, pp. 116 sqq.), the same writer observes (*Tent Work in Palestine*, ii. 221): 'The greatest respect is shown to the chapel, where the invisible presence of the saint is supposed always to abide. The peasant removes his shoes before entering, and takes care not to tread on the threshold.'

[3] Th. Williams, *Fiji and the Fijians*[2] (London, 1860), i. 233.

[4] *The Book of Ser Marco Polo*, translated by Colonel H. Yule[2] (London, 1875), i. 336.

touch the threshold.[1] When the monk de Rubruquis, who went as ambassador to China for Louis IX, was at the court of Mangu-Khan, one of his companions happened to stumble at the threshold in going out. The warders at once seized the delinquent and caused him to be carried before 'the Bulgai, who is the chancellor, or secretary of the court, who judgeth those that are arraigned of life and death'. However, on learning that the offence had been committed in ignorance, the chancellor pardoned the culprit, but would never afterwards let him enter any of the houses of Mangu-Khan.[2] The monk was lucky to get off with a whole skin. Even sore bones were by no means the worst that could happen to a man under these circumstances in that part of the world. Plano Carpini, who travelled in Tartary about the middle of the thirteenth century, a few years before the embassy of Rubruquis, tells us that any one who touched the threshold of the hut or tent of a Tartar prince used to be dragged out through a hole made for the purpose under the hut or tent and then put to death without mercy.[3] When the Italian traveller Pietro della Valle visited the palace of the Persian kings at Ispahan, he observed that 'the utmost reverence is shown to the gate of entrance, so much so, that no one presumes to tread on a certain step of wood in it somewhat elevated, but, on the contrary, people kiss it occasionally as a precious and holy thing.' Any criminal who succeeded in passing this threshold and entering the palace was in sanctuary and might not be molested. When Pietro della Valle was in Ispahan, there was a man of rank living in the palace whom the king wished to put to death. But the offender had been quick enough to enter the palace and there he was safe from every violence, though had he made a step outside of the gate he would instantly have been cut down. 'None is refused admittance to the palace, but on passing the threshold, which he kisses, as I have before remarked, he has claim of protection. This threshold, in short, is in such veneration that its name of Astane is the denomination for the court and the Royal palace itself.'[4] Again,

[1] Colonel H. Yule, *Cathay and the Way thither* (Hakluyt Society, 1866), i. 132. The friar's travels began between 1216 and 1218 and ended in 1230.

[2] 'Travels of William de Rubruquis,' Pinkerton's *Voyages and Travels*, vii. 65–7.

[3] Jean du Plan de Carpin, *Relation des Mongoles ou Tartares*, ed. D'Avezac (Paris, 1838), cap. iii. § 2.

[4] Pietro della Valle, 'Travels in Persia,' Pinkerton's *Voyages and Travels*, ix. 26, 31.

the Caliphs of Bagdad 'obliged all those who entered their palace to prostrate themselves on the threshold of the gate, where they had inlaid a piece of the black stone of the temple at Meccah, in order to render it more venerable to the peoples who had been accustomed to press their foreheads against it. The threshold was of some height, and it would have been a crime to set foot upon it.'[1]

Thus Jehovah's dislike of people who trod on thresholds was not a Jewish eccentricity, for it has been shared by Fijian chiefs, Chinese emperors, Tartar khans, Shahs of Persia, and Caliphs of Bagdad, as well as by many persons in a humbler walk of life. The Korwa of north-western India, for example, will not touch the threshold of a house on entering or leaving it.[2] There is a Mongol proverb: 'Step not on the threshold; it is sin!'[3] It was a rule of ancient India that a bride should cross the threshold of her husband's house with the right foot first, but should not stand on it.[4] In the Altmark an old German custom required that on her arrival at her new home a bride should be carried by her husband from the wagon to the hearth of the house without being allowed to touch the earth with her feet.[5] The ancient Roman practice of lifting a bride over the threshold of the bridegroom's house was no doubt merely an instance of the same widespread superstition; it had nothing to do with a practice of marriage by capture, though it has often been so interpreted from Plutarch's time downward.[6] The learned Varro more justly derived the custom from the sanctity of the threshold,[7] and the same view has been rightly taken by some

[1] D'Herbelot, *Bibliothèque Orientale*, i (The Hague, 1727), p. 306, s. v. 'Bab,' citing as his authority Khondemir, in the Life of Mostaasem.

[2] W. Crooke, *The Tribes and Castes of the North-Western Provinces and Oudh*, iii. 333.

[3] *The Book of Ser Marco Polo*, translated by Colonel H. Yule[2] (London, 1875), i. 372.

[4] *The Grihya Sutras*, translated by H. Oldenberg, part ii, p. 193 (*Sacred Books of the East*, vol. xxx).

[5] J. D. H. Temme, *Die Volkssagen der Altmark* (Berlin, 1839), p. 73.

[6] Plutarch, *Quaestiones Romanae*, 29. But Catullus (lxi. 166 sq.) knew better. Compare Plautus, *Casina*, iv. 4. 1; Lucan, *Pharsalia*, ii. 359; J. Marquardt, *Das Privatleben der Römer*[2], p. 55; Robinson Ellis, in his commentary on Catullus, *loc. cit.*

[7] Varro, cited by Servius, on Virgil, Ecl. viii. 29: '*Quas* [*scil. sponsas*] *etiam ideo limen ait non tangere, ne a sacrilegio inchoarent, si deposituraе virginitatem calcent rem Vestae, id est numini castissimo, consecratam.*'

moderns.[1] Indeed, the Romans recognized a special god of the threshold named Limentinus, who was roughly handled by the Christian Fathers,[2] his humble station in life laying him open to the gibes of irreverent witlings.

These facts suggest that the officers named Keepers of the Threshold at the temple in Jerusalem may have been posted at the door for the purpose of seeing that nobody committed the heinous offence of treading on the threshold. For this purpose they may even, like the warders of the threshold in the palace at Peking, have been provided with cudgels, which they laid over the backs of all who through ignorance, obstinacy, or accident set foot on the sacred spot.

But while the sanctity of the threshold in many lands is certain, the reason for it is not so, and it may well be that different reasons have been assigned for it in different places. However, there are some grounds for thinking that the threshold has often been viewed as an abode of spirits, human or otherwise; and such an idea would quite suffice to account for the superstitions which have gathered round it. In heathen Russia the spirits of the house are said to have had their seat at the threshold[3]; and consistently with this tradition in Lithuania, 'when a newly baptized child is being brought back from church, it is customary for its father to hold it for a while over the threshold, "so as to place the new member of the family under the protection of the domestic divinities." . . . A man should always cross himself when he steps over a threshold, and he ought not, it is believed in some places, to sit down on one. Sick children, who are supposed to have been afflicted by an evil eye, are washed on the threshold of their cottage, in order that, with the help of the Penates who reside there, the malady may be driven out of doors.'[4] A German superstition forbids us to tread on the threshold in

[1] E. Tyrrel Leith, 'Folk-lore of the Threshold,' *Panjab Notes and Queries*, i. 76, § 460; H. C. Trumbull, *The Threshold Covenant* (New York, 1896), p. 36. The latter work contains a useful collection of facts on the folk-lore of the threshold mixed up with some untenable theories.

[2] Tertullian, *De Idolatria*, 15; Arnobius, *Adversus Nationes*, i. 28, iv. 9, 11, and 12; Augustine, *De Civitate Dei*, vi. 7.

[3] P. von Stenin, 'Ueber den Geisterglauben in Russland,' *Globus*, lvii (1890), p. 269.

[4] W. R. S. Ralston, *The Songs of the Russian People*, pp. 136 sq. In Sonneberg when a child has the cramp it is laid on the door-sill: Aug. Schleicher, *Volkstümliches aus Sonneberg* (Weimar, 1858), p. 146.

entering a new house, since to do so 'would hurt the poor souls'[1]; and it is an Icelandic belief that he who sits on the threshold of a courtyard will be attacked by spectres.[2]

But why should spirits be supposed to have their seat at the threshold? One possible answer is suggested by a Russian custom. The peasants bury still-born children under the threshold[3]; hence the souls of the dead babes may be thought to haunt the spot. But again we may ask, Why should the bodies of still-born infants be buried under the threshold? An answer comes from northern India. 'When a child dies it is usually buried under the house threshold, in the belief that as the parents tread daily over its grave its soul will be reborn into the family.'[4] A similar belief probably explains the custom, common in Central Africa, of burying the afterbirth at the doorway or actually under the threshold of the hut[5]; for the afterbirth is supposed by many peoples, for example by the Baganda, to be a personal being, the twin brother or sister of the infant whom it follows at a short interval into the world.[6] By

[1] A. Wuttke, *Der deutsche Volksaberglaube*[2], p. 372, § 608. However, in Silesia a contrary superstition enjoins you to be sure to tread on the threshold when you enter a new house; for it is thought that otherwise you will not remain in the house a year. See P. Drechsler, *Sitte, Brauch und Volksglaube in Schlesien*, ii (Leipsic, 1906), pp. 2 sq.

[2] F. Liebrecht, *Zur Volkskunde*, p. 370.

[3] W. R. S. Ralston, *Songs of the Russian People*, p. 136.

[4] W. Crooke, *Natives of Northern India* (London, 1907), p. 202. A somewhat different explanation of the custom is given by Colonel Sir R. C. Temple (*Panjab Notes and Queries*, i. 123, § 925): 'A case occurred in Ambálá Cantonments, in which a humble couple, Jaiswárás, in, for them, comfortable circumstances, were arraigned for concealing the birth of a child. It was found buried under the threshold. It turned out that infanticide was the last thing the parents intended, for it was a first-born son, and that the infant had died about nine days after birth, and had been buried where it was found, in order that in constantly stepping over it the parents would run no risk of losing any subsequent children that might be born. They said it was the custom of the caste so to bury all children that died within fifteen days of birth.'

[5] Fr. Stuhlmann, *Mit Emin Pascha ins Herz von Afrika* (Berlin, 1894), pp. 391, 674; *Emin Pasha in Central Africa, being a Collection of his Letters and Journals* (London, 1888), p. 84; J. A. Grant, *A Walk across Africa* (Edinburgh and London, 1864), p. 298; J. Roscoe, 'The Bahima,' *Journal of the Anthropological Institute*, xxxvii. 106 (1907).

[6] The evidence will be given in the third edition of *The Golden Bough*. My authority for the statement in the text as to the Baganda is the Rev. J. Roscoe. For an example of a similar belief among the Toba-Bataks of Sumatra see A. C. Kruijt, *Het Animisme in den Indischen Archipel* (The Hague, 1906), p. 25.

burying the child or the afterbirth under the threshold the mother apparently hopes that as she steps out of and into the house the spirit of the child or of its supposed twin will pass into her womb and be born again. On this hypothesis the widespread belief in the reincarnation of the dead would explain the sanctity of the threshold. But it is possible, and indeed probable, that other causes still unknown to us have contributed to shed a glamour of mystery over that part of the house.[1]

§ 8. *The Sin of a Census.*

From two well-known narratives in the Books of Samuel and Chronicles[2] we learn that Jehovah cherished a singular antipathy to the taking of a census, which he appears to have regarded as a crime of even deeper dye than boiling milk or jumping on a threshold. We read that Jehovah or Satan inspired King David with the unhappy idea of counting his people. Whatever the precise source of the inspiration may have been, for on that point the sacred writers differ, the result, or at least the sequel, was disastrous. The numbering of the people was immediately followed by a great pestilence, and popular opinion viewed the calamity as a righteous retribution for the sin of the census. The excited imagination of the plague-stricken people even beheld in the clouds the figure of the Destroying Angel with his sword stretched out over Jerusalem,[3] just as in the Great Plague of London, if we may trust Defoe, a crowd in the street fancied they saw the same dreadful apparition hovering in the air.[4] It was not till the contrite king had confessed his sin and offered sacrifice to appease the angry Deity that the Angel of Death put up his sword and the mourners ceased to go about the streets of Jerusalem.

[1] Among that peculiar people, the Kafirs of the Hindoo Coosh, the rule never to tread on a threshold appears to be reversed: 'For some reason or other, no Kafir seems to be able to step sedately over the raised threshold of a door. He must spring on to it with one foot, however low the doorway, and however much he has to bend his head. Consequently he retires in a sort of miniature whirlwind, his loose garments floating behind him' (Sir G. S. Robertson, *The Kafirs of the Hindu Kush* (London, 1896), p. 115). This apparently was the sort of practice which excited the wrath of Jehovah.

[2] 2 Samuel xxiv; 1 Chronicles xxi.

[3] 1 Chronicles xxi. 16.

[4] Daniel Defoe, *History of the Plague in London* (Edinburgh, 1810), pp. 33 sq. But Defoe probably copied the narrative in Chronicles.

Though we may not presume to fathom the grounds for this divine dislike of a census, we can at least show that it has been shared by savages. The Gallas of East Africa think that to count cattle is an evil omen, and that it impedes the increase of the herd.[1] And the Lapps used to be, and perhaps still are, unwilling to count themselves and to declare the number, because they feared that such a reckoning would both forebode and entail a great mortality among their people.[2] A precisely similar belief seems to have been held by the Hebrews in the time of David, and the pestilence which immediately followed the census was doubtless regarded by them, as in a similar case it would have been regarded by the Lapps, as a proof sufficient to confute the doubts of the blindest and most obstinate sceptic.

[1] Ph. Paulitschke, *Ethnographie Nordost-Afrikas, die geistige Cultur der Danâkil, Galla und Somâl* (Berlin, 1896), p. 31.

[2] C. Leemius, *De Lapponibus Finmarchiae eorumque lingua, vita, et religione pristina Commentatio* (Copenhagen, 1767), p. 499: '*Censum capitum nec facile inire volebant, nec prodere, metuentes, ne hujusmodi computatio ingentem suorum stragem et funera portenderet et secum traheret.*'

THE RELIGION OF THE TORRES STRAITS ISLANDERS

By Alfred C. Haddon

The Torres Straits Islands roughly fall into three groups: the western, composed of ancient igneous rocks which support a somewhat sparse vegetation; the central, which are mainly vegetated banks of coral sand; and the eastern, composed of modern volcanic rocks and possessing a fertile soil and usually an abundance of food, but, even here, insufficient rain during the north-west monsoon results in a scarcity of garden produce that occasionally leads to a partial famine.

The islanders are typical Western Papuans so far as their physical characters, temperament, and culture are concerned. In his recently published monograph of the languages of Torres Straits Mr. Ray has demonstrated that the morphological linguistic affinities of the Western Islanders are Australian, while those of the Eastern Islanders are Papuan, and 'there is no genealogical connexion between the two languages of the Straits'. With regard to the former he says, 'It is difficult to reconcile the non-Australian physical appearance of the Western Islanders with the Australian form of their language. It has probably resulted from a gradual occupation of the islands by natives from the New Guinea mainland. This has gradually brought about a change in the physical features of the people without materially affecting their language.'

Practices that we term 'magical' and others that can only be described as 'religious' entered into the daily life of the islanders at all points.[1] The former were either performed by groups of men, in which case their object was almost invariably beneficial to the community, or they were performed by individuals, usually for personal ends which were sometimes anti-social. That complex of rituals, beliefs, ideals, and sensations which we understand by the term religion seems to be intimately connected with a belief in

[1] The detailed account of the facts given in this paper will be found in vols. v and vi of the *Reports of the Cambridge Anthropological Expedition to Torres Straits.*

a power or powers of a more or less spiritual or extra-human nature, which can be induced by various means to assist man in securing what he desires.

Ordinary magical practices are beyond the scope of the present essay, but there were certain actions which seem to bridge over the distinction between magic and religion. There was a large variety of natural and worked stones, and carved wooden figures which were supposed to ensure good crops, and to influence animals and the elements. Precise information is unfortunately lacking as to how far these objects were regarded as animated. In Mabuiag, however, wooden human effigies termed *madub* were said to become animated at night and to go round the gardens swinging bull-roarers to make plants grow. Some had merely a generic name, while others had personal names. In most cases (possibly in all) 'sacred words' were uttered when the object was put into definite requisition. As in ritual songs, the words of the sacred formula or invocation were few in number and suggestive rather than fully descriptive sentences. Thus, the sacred men of the *enau*-fruit shrine in the Murray Islands said '*Enau enau* turn round, stalk pluck, branches dead'. Not only were there in the Murray Islands a large number of these objects which belonged to the head-men of different families or to the heirs of certain localities, but there were certain sacred stones or shrines, or rituals such as rain-making, which belonged to larger groups. When making rain by means of his *doiom* (a stone image of a man), a sacred man of the rain *zogo* (to use the term employed by the Murray Islanders for this class of objects), invoked various kinds of clouds, 'dark clouds, stratus clouds, overcast clouds, and rain clouds,' and enjoined them to collect and gather, and the 'noisy wind' was called upon to 'break the coco-nut leaves'. But at the annual rain-making ceremony the following prayer was chanted repeatedly in a small squeaking voice: 'Rain my *zogo*, Give life to me (or 'save me'), And strengthen me.' The former was an invocation or command, the latter was a true prayer. On one of the Murray Islands is a small, practically formless, stone which represents a man and is called Waipem. In January the sacred men of this particular shrine made an offering of fruit, and 'man think inside himself' (as the natives expressed it in jargon English), 'If we give you plenty fruit, I think you give us plenty turtle.' They then went to the two points of the islet to look out for the turtles which would be sure to come. In these two instances the object prayed to had

the semblance of a man, but that was not the case in the divining oracle of Tomog *zogo*, to which reference will shortly be made.

Masked dances for the purpose of increasing the food supply were very common throughout these islands. Some of these, such as the saw-fish dance, were of a 'magical' nature, especially when animal-masks were worn. When, however, the masks represented a human face, we may suspect a personal element coming in; such were the *mawa* masks of the western islands and the *dogai* masks of the Murray Islands. In the latter case the ceremonies might be termed almost religious.

Also of a transitional character was the totemism of the Western Islanders, which had all the essential traits that characterize Australian totemism. As a social institution it was a distinct ameliorating influence in social intercourse and tended to minimize antagonism between communities. Individuals identified themselves with their totem (*augud*) by decorating themselves or their belongings with representations of the totem. A psychical affinity was supposed to exist between the totem and its human kin; thus the crocodile-men were said to be very strong and to have no pity. The cassowary-men were fond of fighting, and it may be noted that the cassowary is of very uncertain temper and can kick with extreme violence; the members of the clan were said to be especially fast runners and prided themselves on their thin legs, which they likened to those of a cassowary. If there was going to be a fight, a cassowary-man would say to himself, 'My legs are long and thin, I can run and not feel tired; my legs will go quickly and the grass will not entangle them.' The snake-men were said to be fond of fighting, and whenever a scrimmage occurred they got out their stone-headed clubs and hit people, putting out their tongues at the same time and wagging them as does a snake. The dog-men were said to be sometimes fierce and fond of fighting like the snake-men; at other times they were friendly and 'glad to see people'. The shark-men were also quarrelsome. On the other hand, the members of the shovel-nosed skate clan were a quiet and peaceable folk, not given to much talking. The ray and sucker-fish were also peaceable clans.

No man might under ordinary circumstances kill or injure his totem; if he did his fellow clansmen would kill or injure him, but any one might kill the totem of a clan other than his own with impunity, but the clansmen of that totem would feel sorry.

There is a little evidence that the totem was invoked when

assistance was required. When a snake-man fought he would cry out 'Snake bites!' which seems to have been a recognized formula. The ray-men had a similar invocation. The praying to heroes, under the appellation of *augud*, belongs rather to hero-cult than totemism.

In Mabuiag the dugong-men performed a ceremony to constrain dugong to come towards the island to be caught, and the turtle-men performed a ceremony to ensure a good turtling season.

It is a noteworthy fact that totemism does not occur in the Murray Islands, and doubtless it was absent throughout the eastern group of islands. The only probable relics of totemism are: (1) the hereditary nature of certain *zogos*, or shrines, with which are associated definite performances, the presumption being that originally these were rituals connected with the increase or control of totems by the elders of the respective clans. That these should be associated with villages or places, quite as much as with families, is only in accord with the assumed replacement of totemism by village exogamy in the island. (2) The existence of a few groups of men with animal names, which at first sight look like totemic clans. So far as could be discovered these groups were concerned solely with certain dances connected with a hero-cult, which, as will be mentioned later, was introduced from the Western Islands. (3) The belief in ghost-animals. The ghost of one about to die or of a recently deceased person usually appeared to the living in the form of some animal. A kingfisher may appear for any one, but there are certain animals that appear at the death of members of particular groups of individuals, the idea evidently being that the ghost of a person takes the form of an animal to which it is akin, and in that guise appears to the survivors. Usually it is the eponymous animal of a group with an animal name that appears on the death of a male member. Women are represented by flying animals, bats and birds, but no relation was indicated between groups of women and particular birds. This looks suspiciously like what has been termed a 'sex-totem'; but I am not prepared to admit that these birds are totems. The ghost-animals certainly look like vestiges of totemism, although there is no evidence to show that these animals were ever connected with the social organization.

Whilst totemism as a social institution has many good points, it seems to be too indefinite and impersonal to constitute a satisfactory basis for an effective religion. There cannot be much

satisfaction in an indefinable alliance with a group of animals or plants, nor can these be regarded as effectual helpers in times of difficulty and danger. Hence it was not surprising that there was no evidence in Torres Straits that totemism was developing into anything more distinctively religious. The need for guidance or assistance had to be supplied from other sources.

In the Murray Islands numerous omen birds provided a means by which men could obtain information on matters that were beyond their ken, and there was also an elaborate oracle, Tomog *zogo*, which was consulted only by the shark-men. The oracle was thus addressed, 'Tomog, you make me to know all things,' and a definite request for information was made, to which the reply usually consisted in the appearance and movements of certain animals.

Various forms of divination were constantly employed in Torres Straits, some of which were purely 'magical', while others had reference to spiritual influence; of the latter by far the most important were various methods of skull divination. For this purpose skulls of relatives were usually employed, but this was not essential. According to one method, the inquirer would enjoin the skull to speak the truth, and, putting it by his pillow at night time, would go to sleep; the dreams were the messages from the spirit of the deceased, and upon these action would be taken. This simple form of divination could be performed by any person.

In consonance with the increased specialization of religious function among the Murray Islanders, we find that skull divination for theft was in the hands of the shark-men, who were the most important members of the local hero-cult. The diviners went into the sacred house, taking with them the skull of a former sacred man. One, who had to be a leading man of the group, put on a mask and repeated certain words. They went into the bush and were led to the house of the thief by the noise of a stridulating nocturnal insect. A similar method was employed to discover one who had successfully charmed or poisoned another.

The Western Islanders appear to make a distinction between the ghost (*mari*) of a recently deceased person and its later stage as a definite spirit (*markai*)[1]; but I have no evidence that this was done by the Murray Islanders. If we accept the western view, we may

[1] Perhaps the Eastern word *mar* (which has the same significance as the western *mari*, 'ghost, soul, reflection, shadow,' designates the earlier stage of disembodiment, and the word *lamar*, 'ghost or spirit' (probably an abbreviation

assert that the Torres Straits Islanders feared the ghost but believed in the friendly disposition of the spirits of the departed. In Mabuiag the corpse was carried out of the camp feet foremost, or else the ghost would find its way back and trouble the survivors, and the food and water of which the deceased had been partaking was placed on or near the platform on which the corpse was laid, otherwise the ghost came back for them and would thus annoy and frighten the relatives. If the food was found scattered the next morning, the people said the ghost was angry and threw the food about. The ghost of a recently deceased person is particularly to be feared in Murray Island, as it haunts the neighbourhood for two or three months. We have native testimony for tracing the origin of the elaborate funeral ceremonies to this belief. The Murray Islanders perform as many as possible of the necessary ceremonies in order that the ghost of the deceased might not feel slighted, for otherwise it was sure to bring trouble on the relatives by causing strong winds to destroy their gardens and to break down their houses. These ceremonies, some of which might take place months after the last death, or even annually, seem to consist in Murray Island of two main elements, (1) the dramatization of a legend accounting for various practices connected with funerals and the journeying of ghosts to the mythical island of Boigu in the west; in this ceremony the chief performer, who represented the spirit messenger, was supposed to take away the ghosts of the dead to Boigu. (2) The pantomimic representation of recently deceased persons in their character of denizens of the spirit world. We are informed that the illusion of the personification of ghosts by men was almost perfect, more especially as it is assisted by the implicit belief of the women and children that the performers really are ghosts or spirits. There is no doubt that the latter ceremonies comforted the mourners; probably the main reason was that it reassured them that the ghostly relatives would no longer haunt the living, but apart from this there may have been a real pleasure in the idea of the return of the ghost, for we must not forget that these affectionate people kept their dead in remembrance as far as possible with their limited resources. This may be the explanation of the stones, painted with human faces, which were placed along a funeral screen in the island of Nagir, and to which,

of *lela mar*, 'man's spirit'), signifies the later stage; in which case it would be strictly equivalent to *markai*, which Mr. Ray thinks is derived from *mari kai*, i. e. *kazi*, 'spirit person' (*kazi* is usually abbreviated into *ka* in compound words).

according to Macgillivray, were 'attached names of persons who were dead'. I was also several times assured that the preservation of skulls of relatives in houses was due to the sentiment of affection.

The belief in continued existence after death was very real to these people. In the Western Islands, the ghost of a recently deceased person remained a very intangible sort of thing for some time after death, and it was believed to reside in the mythical island (there called Kibu) for some time before it became a proper spirit; as a preliminary it had to be hit on the head, and then was instructed in all it had to do. The spirits behaved in every way as do men. It is evident that the preliminary funeral ceremonies related to the ghost, while the subsequent ones were connected with its final entrance into the spirit world.

Certain men in Mabuiag are reputed to be friends of the spirits and to be possessed of the gift of spirit-divination. Such a man is termed a 'spirit-touching man'. The spirit and the man talk either in a whistling manner or by ventriloquism. Other 'spirits' friends' are the 'ghost-seeing-men', to whom the ghosts of deceased persons appear. They are constrained by the ghosts to go at times into the bush, on which occasions they become possessed, or, as it was expressed, 'turn cranky, come like devil [ghost] now.'

In no case have I obtained in the Western Islands an indication of anything approaching a worship of deceased persons ancestral or otherwise, with the exception of the heroes shortly to be mentioned; neither is there any suggestion that their own ancestors have been in any way apotheosized.

Thanks to the efforts of Mr. John Bruce a little information on what he regards as a kind of ancestor worship has recently been obtained from the Murray Islands, but even he found it excessively difficult to persuade the people to tell him anything about it. He says, 'Certain septs had their own *ad giz*, who are supposed to be the founders of their respective septs, and are reverenced and no doubt were worshipped and supplicated on behalf of the needs of the sept.' The word *ad* implies anything old and traditional, with the idea of a sanctity that is associated with ancient wont; thus certain folk-tales are *ad*, or anything about which a legend is told, and all sacred and magical stones are *ad*; Mr. Bruce adds it 'signifies a god', but I think this is too concrete an idea. *Giz* means origin, base, foundation, or a collection. Mr. Bruce defines *ad giz* as 'the first god, or god of the very beginning of things'; perhaps 'ancient of days' might

be a better term. Some of the *ad* were warriors, others men of peace. Each *ad* has still his lineal descendant in his own sept; although now it does not seem much of an honour, there is no doubt that formerly these men must have held a high position in their respective septs. The direct descendants bear the names of their illustrious ancestors, but these are never used in addressing them. The direct descendants are 'mere men', and Mr. Bruce considers 'that they could not have looked on their *ad* as supernatural beings'. The *ad giz* point back to a time prior to the introduction of the hero-cult, and were probably the head-men of their respective groups, who seem to have been reverenced, though to what extent is very difficult to determine.

The exact relation of morality to religion is generally regarded as a moot point, but the evidence on this point is sufficiently clear in the Torres Straits Islands. Rules of conduct were exactly defined and as far as possible enforced, not by officials of religion, nor by a special judiciary or executive body, but by public opinion. Ultimately recourse might be had to the services of a sorcerer, or to physical force put into operation by the old men, by their delegates, or by the friends of the injured party; but these were merely the recognized means by which public opinion maintained its authority when the known disapprobation that anti-social conduct would entail was ineffectual.

Instruction in ethics and conduct was given more particularly during the initiation period. The injunctions were:—Remembrance of admonitions, reticence, thoughtfulness, respectful behaviour, prompt obedience, generosity, diligence, kindness to parents and other relatives in deed and word, truthfulness, helpfulness, manliness, discretion in dealing with women, quiet temper. Bravery, ferocity, endurance of pain and hardship and other warlike qualities were regarded as great virtues. The prohibitions were against theft, borrowing without leave, shirking duty, talkativeness, abusive language, talking scandal, marriage with certain individuals, revealing the sacred secrets.

It is still believed by the Murray Islanders that a spirit may feel resentment when children of the deceased are neglected or wronged, or when land or chattels of the deceased are taken by those who have no claim to them. No doubt in the past such fear of the spirit's wrath had a deterrent effect on wrong-doers and helped to keep the people straight, although now they look rather to the civil laws than

to the spirits as a means of getting their rights and punishing offenders. With this exception, there is no evidence that their code of morality derived either sanction or support from religion. No appeal was made to totem, ancestor, or hero, and no punishment from these quarters was made for infringement of social morality.

So far we have briefly considered those religious institutions which we may safely regard as belonging, on the whole, to the earlier stages of the culture history of the natives of Torres Straits; but the most important development that took place was definitely due to influences from the outside and resulted in the establishing of hero-cults.

In the Western Islands we meet with traditions of many heroes, some of whom were described as men; others were relegated to a long time ago, while some were spoken of as *ad* or *adi*, which, according to Mr. Ray, now signifies a legend or honorific title; but probably it had the same significance as the term *ad* of the Eastern Islanders (see p. 181); to some were applied the same name, *augud*, as that by which a totem was called. Concerning those of the first group there is told nothing, or very little, that is miraculous, they being simple warriors or people who had adventures. Not a few were culture heroes who introduced improved methods of agriculture or fishing, and it is in this group that the marvellous begins to appear. Several introduced new ceremonies and instructed the people in the appropriate dances. Finally a few heroes were the objects of a special cult.

Sida, the great culture hero for vegetable food, came from New Guinea, where he returned after visiting the Western and Eastern Islands of Torres Straits. Everywhere he is regarded as a benefactor; he instructed the people in language, he stocked reefs with the valuable cone shell, and notably he introduced plants useful to man. He was a very amatory person, and valuable economic plants sprang up as the result of his amours, an example of the close association in the native mind of the sexual act with agricultural fertility. The superior fertility of Mer is also accounted for by the introduction of garden plants from Badu and Moa by two heroes, and at the same time this accounts for the impoverishment of these two Western Islands. The death dances were introduced into the Western Islands by two culture heroes from New Guinea, one of whom brought over some funeral dances to Waier, the

smallest of the three Murray Islands. Two culture heroes of Mer are reputed to have been the first to build the large weirs for catching fish which they also introduced in some of the central islands. At each place which they visited after leaving Mer, they either taught a new language or suggested a different way of speaking the old. This is the only instance known to me of culture spreading westwards from the Eastern Islands.

The most prominent of the heroes were Kwoiam, who was almost certainly of Australian descent, and a family of brothers who seem to have come from New Guinea.

Kwoiam, the warrior hero of Mabuiag, made two crescentic objects of turtle-shell, which blazed with light when he wore them at night-time, and he nourished them with the savour of cooked fish. These objects were termed *augud*, which is the same name by which a totem was called (presumably because the natives did not know by what other sacred name to call them), and they became the insignia of the two phratries into which the old totem clans of Mabuiag were grouped. In this island Kwoiam was designated as *adi*, and occasionally he himself was spoken of as *augud*, but no record of him or of his emblems occurs as a totem in the genealogies of the people of Mabuiag collected by Dr. Rivers. In the Muralug group of islands he was regarded as the 'big *augud*', and the '*augud* of every one in the island'. Connected with the cult of Kwoiam were two heaps of shells, called navels of the *augud*, which were constructed to show that the two *augud*-emblems originated there, and when it was deemed necessary to fortify the latter they were placed upon their respective navel-shrines. The cult of Kwoiam was associated with warfare, and when attacking an enemy the warriors formed into two columns, each of which was led by a head-man who wore the Kwoiam emblems. The moral value of the *augud*-emblems in war must have been very great, and the natives themselves recognized the fact; as one man said: 'Suppose we have not an *augud*, how can we fight?' It is recorded that on one occasion the victorious Mabuiag men refused to continue fighting the Moa men on account of the temporary absence of the two *augud*-men. The Moa men also had magical emblems associated with Kwoiam, but these were not effective as compared with the former, 'because Kwoiam belonged to Mabuiag and not to Moa.'

As Kwoiam was an inspiring feature in the life of the inhabitants of the more westerly islands, so a group of hero

brethren played a similar part for the natives of the central and eastern islands.

Sigai and Maiau were the two brothers who went to Yam, and each became associated, in his animal form, with one of the two pre-existing phratries. A shrine was erected for each, the essential feature of which was a turtle-shell model representing respectively a hammer-headed shark and a crocodile, under each of these was a stone in which the spirit, the so-called *augud*, resided. Outside the enclosure which screened the shrines from profane gaze were two heaps of shells which, as in the cult of Kwoiam, had a mystical connexion with the shrines and were similarly termed 'navels of the *augud*'. The shrines were so sacred that no uninitiated persons might visit them, nor did they know what they contained; they were aware of Sigai and Maiau, but they did not know that the former was a hammer-headed shark and the latter a crocodile; this mystery was too sacred to be imparted to uninitiates. When the heroes were addressed it was always by their human names, and not by their animal or totem names. Warriors would be enabled to go whither they liked if they sung certain songs at the shrines. They prayed as follows before going to attack an enemy: 'O *Augud* Sigai and *Augud* Maiau, both of you close the eyes of those men so that they cannot see us.' I was also informed that when the Yam warriors were fighting they would also call on the name of Kwoiam, and even on that of Yadzebub, although the latter was a local warrior who was always described as 'a man'. From the folk-tales it appears that Sigai and Maiau are more mythical or mysterious than Kwoiam; we have thus an instructive series of helpers: Yadzebub, the famous local warrior; Kwoiam, the warrior hero of another island; and Sigai and Maiau, the immigrant heroes whose cult was materialized in turtle-shell images, and the spirit of each of whom resided in a particular stone.

The account of the introduction of the hero-cult into the Murray Islands is very perplexing. It appears that Bomai, who was often spoken of as Malu, came first and was recognized as a *zogo*, that is something sacred; he was represented by a human-face mask. Later Malu arrived with a fleet of canoes from various western islands in search of Bomai. Malu also became a *zogo*, and was represented by a mask in the form of a hammer-headed shark. The foreigners exhibited certain dances which they gave to their hosts and then returned home. These are the dances which were

referred to when dealing with the possible vestiges of totemism in the Murray Islands. The Bomai-Malu cult predominated in the Murray Islands, and the sacred men in connexion with it attained considerable power which they frequently used for their private ends.

At present we cannot understand the full significance of the hero-cults that spread over the islands, for this we must await further investigations in the district of Cape York on the one hand, and in the adjacent region of New Guinea on the other. The ultimate development of the cults in the islands is not without interest. The Western Islands are not particularly fertile, so the natives spend a good deal of their time in fishing, and there is considerable intercourse between various islands, due to trade or warfare. Here the hero-cults developed into war-cults. The Murray Islands in the east are fertile, and the people are much given to agriculture; they are so far from other islands, except a few insignificant vegetated sand-banks of the central group, that there was little intercourse with other people, nor did we obtain records of any inter-insular fighting, thus there was no inducement for the hero-cult to develop into a war-cult, but it concerned itself more with the social life of the people, and the three sacred men were on the way to become priests.

Totemism was still in force in the Western Islands at the time of the arrival of the hero-cults, but it had probably already disappeared in the Murray Islands. Everywhere, but perhaps more particularly in the Eastern Islands, there were numerous small family or local rituals, most of which were associated with improving the food supply. A religion then appeared that replaced in the west the indefinite communal association of a totem with its clan for a definite personal relation with a superhuman being, and it is no wonder that it spread, being carried from island to island. These cults also provided in both the Western and the Eastern Islands a synthesis which had hitherto been lacking, as the men could now meet as members of a common brotherhood, which was impossible under the earlier conditions, and a feeling of intense pride in the new cults was engendered.

An interesting parallel to these hero-cults of Torres Straits occurred also in Fiji. The people of Viti-Levu are divided into two groups, the Kai Veisina and the Kai Rukuruku, that trace their descent from Veisina and Rukuruku, who drifted across the Big

Ocean and taught to the people the cult associated with the large stone enclosures, Nanga. Veisina arrived first, and where he landed the turmeric plant sprang up, and where Rukuruku first placed his foot the candle-nut grew. Their followers paint themselves respectively with the yellow or black pigments obtained from these plants. When they landed they said, 'Let us go to the Chief of Vitongo and ask him to divide his men between us that we may teach them the Nanga, for which purpose we have come to Fiji.'[1] The last sentence points to a definite propaganda, and one is tempted to suggest that a similar movement may also have taken place in Torres Straits since there is not the slightest trace in tradition or elsewhere of secular aggression.

A view has been recently expressed by L. Frobenius[2] and W. Foy[3] that some of the hero tales from Torres Straits are nature myths. The amorous Sida, the bestower of vegetable food, is interpreted as a sun-god, and the berserker Kwoiam as a moon-god. I propose, elsewhere, to discuss this recrudescence of a method of reasoning that was formerly so beloved by a certain school of students who interested themselves in Indo-European mythology.

The tales in question must either have had a local origin or have been transmitted from elsewhere. The theory requires that, if the tales are indigenous, the natives must regard them as nature myths; but for this there is not a shred of evidence. The burden of proof rests with the proposers of the theory if it be contended that these are travelled tales. It is not sufficient to find parallels in remote places for incidents in our tales, as such conceptions are world-wide among people in an analogous stage of culture. Geographical continuity must be demonstrated between the Torres Straits tales and the tales of the parent country, and, even should the latter be proved to be intentional nature myths, it does not follow that they were nature myths by the time they reached Torres Straits. The Torres Straits Islanders have their nature tales, but there is no evidence that they regard the tales indicated by these students in that light, and therefore they are not nature myths for

[1] 'The Nanga of Viti-Levu,' by A. B. Joske, *Internat. Arch. f. Ethnogr.*, II, 1889, p. 258.

[2] L. Frobenius, 'Die Weltanschauung der Naturvölker,' *Beitr. z. Volks- und Völkerkunde*, Bd. VI, 1898; — *Das Zeitalter des Sonnengottes*, Bd. I, 1904, p. 62. p. 189.

[3] W. Foy, *Archiv für Religionswissenschaft*, Bd. X, 1907, p. 129.

them. Why should we not regard these tales as raw material out of which mythology may arise? According to this view a mythology is arising in Melanesia and has arisen in Polynesia.

A review of the evidence makes it clear that the hero-cults were not an evolution from totemism; a transformation of totemism has certainly occurred, but it does not appear to me to be a gradual growth—a metamorphosis in the natural history sense of the term—so much as an actual grafting of a new cult upon an old. Neither is there any suspicion that the heroes of the cults are locally-developed ancestors, though they may have had this origin in their original country. Unless the heroes of the cults be regarded as gods, I think it can be definitely stated that the Torres Straits Islanders had no deities, and certainly they had no conception of a Supreme God.

CONCERNING THE RITE AT THE TEMPLE OF MYLITTA

By E. SIDNEY HARTLAND, F.S.A.

Among the religious rites of antiquity there was none more alien to modern feeling than the sacrifice of chastity by every Babylonian woman at the temple of Mylitta. It is described first and in most detail by Herodotus, whose denunciation of it shows that to the Greeks of the fifth century B.C. it was as abhorrent as it is to us. According to this account, every woman once in her life was required to sit down in the precincts of the temple of Mylitta wearing a wreath of cord about her head, and there to wait until a stranger should throw a silver coin into her lap and summon her with ritual words in the name of the goddess to follow him. She was not allowed to refuse, but was compelled to follow the first man who threw, and to have sexual intercourse with him outside the temple. She might then depart to her home, her duty to the goddess being fulfilled.[1] The historian lets fall the observation that there was a similar custom in some places in Cyprus. This has been supposed to be referred to by Justin, who wrote probably after the establishment of Christianity, but whose work consists of selections from Trogus Pompeius, a lost writer of the Augustan age. He reports that it was the Cypriote custom to send maidens before their marriage on certain days to seek their dowry by prostitution on the seashore, and to pay the offerings to Venus for their future chastity. Dido on her way to Carthage touched at the island at the very time, and took on board her fleet eighty of these damsels, to be wives to her followers and assist in peopling the city she was going to found.[2] We shall further consider Justin's statement hereafter. For the moment we pass on to Heliopolis (Baalbec) where, the ecclesiastical historian Socrates affirms, virgins were offered in prostitution to strangers.[3] He does not, any more than Justin, connect this with

[1] Herod. i. 199; Strabo, xvi. 1, 20. Further details are supplied by the Epistle of Jeremy appended to the Apocryphal Book of Baruch.

[2] Justin, xviii. 5.

[3] Socrates, *Hist. Eccl.* i. 18.

a temple or a divinity; but from Sozomen we gather that it was a religious observance, inasmuch as the prostitution of virgins prior to their marriage is stated to have been abolished by Constantine when he destroyed the temple of Aphrodite.[1] A similar custom, according to Aelian, was followed by the Lydians. And he expressly says that when once the rite had been performed the woman remained ever afterwards chaste, nor would a repetition be forgiven her on any plea.[2] Herodotus, however, states that the daughters of the common people in Lydia earned their dowries by a life of prostitution.[3] The two writers are obviously referring to two different customs. A third custom distinct from either is mentioned by Strabo as practised by the Armenians, among whom even the highest families of the nation consecrated their virgin daughters to the service of the goddess Anaitis, to remain as prostitutes at her temple before their marriage.[4]

What is the relation of these three customs? They have usually been considered as closely connected. It may be, as Dr. Frazer suspects, that the real motive for the custom described as that of earning dowries by prostitution was religious, rather than economical, although my own suspicions point in another direction. But putting that custom aside for further examination, both the others are certainly portrayed as religious. As practised by the nations of Western Asia for a thousand years prior to the fall of paganism they were annexed to the cult of certain divinities. There is, however, a broad distinction to be drawn between a custom requiring every woman once in her lifetime to submit to the embraces of a stranger, and one which consecrated a life of prostitution. Such a life was one of devotion to the goddess as a more or less permanent servant. The other custom demanded a single act which freed the worshipper for the rest of her days. It may be freely conceded that the goddess at whose temple, or on whose feast-day, the act was performed was endowed with similar characteristics to those of the goddess in whose service the life of prostitution was lived. It may even have been that sometimes the same goddess had bands of harlots attached to her shrine, and also required the sacrifice of the virginity of all other women in the manner described. This perhaps, as we shall see, was the case in Lydia. We should

[1] Sozomen, *Hist. Eccl.* v. 10.
[2] Aelian, *Var. Hist.* iv. 1.
[3] Herod. i. 93.
[4] Strabo, xi. 14, 16.

still need to investigate separately the two customs. One of the most fertile sources of error in the interpretation of custom is the fatal tendency of rites distinct, or even altogether different in origin and intention, but similar in expression, to converge. This convergence is accelerated by a variety of causes. The natural vagueness of tradition, the forgetfulness of the exact original meaning, the gradual predominance of one idea over another owing to circumstances which, for want of knowledge, we call accidental, the tendency to repeat by way of precaution in one rite acts which essentially belong to another, are all causes of the kind referred to. Moreover, we have so often found in the similarity of rite the real key to a common interpretation, that where convergence does not in fact occur there is a temptation to read identity of meaning into two rites having a superficial likeness. It behoves us, therefore, to be on our guard, and to scrutinize with some scepticism all cases where the identity both of act and intention is not demonstrably complete.

The practices I have enumerated have all been interpreted as expiations for marriage. Marriage, it is said,—the appropriation of one or more women to one man—is an evolution from the primeval condition of promiscuity. Religious prostitution, the *jus primae noctis* and other customs are expiations exacted by society from women who are thus appropriated. They witness to the primeval common rights of the male sex, thus asserted for the last time by one or more on behalf of all on abandoning the woman to the exclusive possession of one of their number.

Now, if the interpretation in question be suitable for any of these customs, it is more suitable for the single rite such as that at the temple of Mylitta than for the exercise of prostitution over an extended period; and it is to this rite that I desire more particularly to call attention in the present paper. I need hardly observe that the explanation of the rite as an expiation for marriage does not by any means follow of necessity from the theory of primitive promiscuity. On the contrary it overlooks one of the peculiar features of the rite. Alike at Babylon, at Heliopolis, and apparently at Cyprus (if Cyprus be a case in point) the act has to be accomplished with a stranger. If it were a forfeit rendered to the general body of men, who might have had a claim to temporary union but for the institution of marriage, or if it were a formal witness of that claim, it would seem, prima facie, more natural that it should be accom-

plished with some or more of the claimants, that is to say with a member or members of the same community. A similar rite of intercourse with a stranger was practised, as Lucian relates, at Byblus. There it was the custom at the mourning for Adonis to perform the well-known mourning rite of cutting off the hair. Any woman who refused to do this was required to exhibit herself on one day of the festival and undergo prostitution to one of the strangers who resorted thither, handing over the price to the goddess called by Lucian the Byblian Aphrodite.[1] The rite as there practised therefore was, at all events in the second century A.D., an alternative to the dedication of hair: it was a redemption for the tresses that should have been sacrificed. Thus the woman would repeat the expiation once a year, whether married or single, so long as she was unwilling to shear her locks, or preferred the alternative sacrifice of her chastity. There is no evidence that it ever had anything to do with marriage; it certainly had not when Lucian wrote.

The rite at Byblus must, however, be distinguished from those we are considering. They were performed by every woman without alternative, but they were performed only once. If they were an expiation for marriage we should expect to find them described as part of the marriage rites. The Balearic islanders, the Nasamonians and the Auziles in antiquity had, as well as many modern savages, such rites, whether or not they can be properly explained as an expiation for marriage. But at the most the rites with which we are now concerned were a preliminary to marriage—a necessary preliminary, perhaps, but one that might have been accomplished at any period before it. Indeed, so far as appears from Herodotus, the victim, if we may call her so, of the Babylonian rite was not necessarily unmarried. But comparison of the accounts of the practice at Heliopolis, in Lydia and in Cyprus renders it fairly certain that it was only unmarried women who were subjected to it, and that it was essentially a sacrifice of maidenhood. A passing reference by Eusebius has been interpreted to imply that at Heliopolis both married women and girls were prostituted in the service of the goddess.[2] But Eusebius says nothing about the goddess. His reference must be construed in the light of Socrates' statement that women were by the law of the country required to be common,

[1] Lucian, *De Dea Syria*, 6.

[2] Frazer, *Adonis*, 22, note 2.

and hence the offspring was doubtful, for there was no distinction between fathers and children.[1] Whatever else those phrases may mean, they entirely negative the theory of expiation for marriage. But they do not refer to the custom of prostituting virgins to strangers, which the historian expressly distinguishes.

It may be objected to this reading of Herodotus that while he uses the generic term women (γυναῖκες) in speaking of the victims, on the other hand, in a previous chapter referring to the Babylonian marriage customs, he reports that once a year in every village the marriageable maidens (παρθένοι) were all put up to auction, the respective purchasers being required to give security that they would marry them; and it was unlawful to give them in marriage in any other way. The objection is of little weight. It is needless to consider whether we are to understand the specific term παρθένοι literally. Even if so, there would doubtless be ample time for the performance of the rite at the temple of Mylitta between the auction and the marriage. It does not appear that marriage followed the auction immediately. Had that been contemplated, security would hardly have been necessary. When the anniversary came round all the maidens who had during the preceding year attained puberty and thus become ripe for marriage (γάμων ὡραῖαι) were probably put up. Those who had not previously undergone the rite would, if my interpretation be correct, be required to submit to it before marriage.

The theory of expiation for marriage has been so generally abandoned by anthropologists that it is superfluous to discuss other and obvious objections to it. But the appearance of prostitution which the rite presents demands further consideration. At Babylon, although a piece of money passed, the payment seems to have been merely *pro forma*. It mattered not how small the coin was, it could not be refused. Whatever it was, Strabo tells us it was considered as consecrated to the goddess. Lastly, the rite once performed, no gift, were it ever so great, would be accepted to repeat it. The details of the rite at Heliopolis and among the Lydians have not been preserved to us; but we may with probability infer that they were similar. In Lydia, indeed, if we are to trust both Aelian and Herodotus, two distinct customs are traceable, namely, the sacrifice of virginity and the life of prostitution to earn a dowry. A Greek inscription of the second century A. D., found at Tralles and referred to by Dr. Frazer, discloses also the existence of religious

[1] Socrates, *loc. cit.*

prostitution by girls expressly chosen by the god and set apart for that end.[1] This is a similar custom to that of the Armenian girls already mentioned, and is not to be confounded with the prostitution mentioned by the Father of History as practised by all the daughters of the common people. Whatever may have been the origin of the latter, the other two in the time of Aelian were connected with religion. On the island of Cyprus we seem to find much the same state of things. If we may believe Justin, the maidens earned their dowry by prostitution. From other sources we learn that there were mysteries of the Cypriote Aphrodite, which were said to have been instituted by Cinyras, king of Paphos and father of Adonis. Into these mysteries there was a regular initiation. Sexual matters no doubt formed their staple teaching; and what classical and especially apologetic writers would call prostitution would be practised. The legend ran that the daughters of Cinyras, through the wrath of Aphrodite, united themselves with strangers.[2] Probably it was believed to be in imitation of them that the maidens of Cyprus sought prostitution on the sea-shore. In any case the story indicates, as Dr. Fraser has pointed out, 'that the princesses of Paphos had to conform to the custom as well as the women of humble birth.' But if this be so, the object of the harlotry alleged by Justin falls to the ground, since it would be unnecessary for princesses to earn their dowry. It may be suspected, therefore, that Justin or his authority has confounded two disparate customs, that of earning the dowry by prostitution, and that of a religious sacrifice of virginity in connexion with the mysteries of Aphrodite, in which the other party to the rite was a stranger. Only thus can we satisfactorily explain the limitation of the practice to stated days, probably festivals of Aphrodite, and the phrase about paying the offerings to her for future chastity.

The money payment, whether large or small, was in the Byblian rite, as in the Babylonian and (if I interpret correctly) in the Cypriote rites, consecrated to the goddess. We may infer that the same was the case wherever else the rite was performed. At Byblus it was the alternative to the consecration of the woman's

[1] Ramsay, *Cities and Bishoprics of Phrygia*, i. 94, 115; Frazer, *Adonis*, 23. Such religious prostitutes were, of course, common in Western Asia. Cf. Strabo, xii. 3, 36.

[2] Clement of Alexandria, *Protrept.* ii; Arnobius, *Adv. Gentes*, v. 19; Firmicus Maternus, *De Errore Prof. Rel.* x; Apollodorus, *Bibl.* iii. 14, 3.

hair. Prostitution—that is, sexual intercourse for hire—is not a primitive practice; it is a product of civilization. The appearance of prostitution in connexion with religion may be accounted for by the influence upon the religious practice of the general practice of harlots. Analogy would suggest that intercourse other than conjugal or the satisfaction of the genuine passion of love demanded a monetary consideration. But when that intercourse was the performance of a religious duty the money was not kept as gain by the woman. It was not earned for herself, but devoted to the goddess. Where bands of 'harlots' were attached to a temple their earnings probably went to swell the temple funds out of which they were supported.[1] It may accordingly be suggested that the hire was not an essential part of the rite, but merely an aftergrowth in the process of adapting an older custom to the changing manners and religious ideas of a growing civilization.[2]

Assuming, therefore, that the rite was a sacrifice of virginity to which every woman was subjected, it would probably be performed either on the attainment of puberty or as a preliminary to the marriage ceremonies. But we gather from the historian's account of the sale of the village maidens around Babylon that the auction followed almost immediately after the attainment of puberty, or within a year at the furthest. The practice of most ancient nations, as of nearly all barbarous and savage peoples, and indeed of many in a high stage of civilization, would lead us to expect that marriage would be entered into within a very short time of the bride's puberty. Sometimes marriage even precedes puberty. Where, as more usual, it follows that epoch of life the rites incident to puberty must first be completed. Among such rites defloration is not infrequently found. In this respect the Australian tribes are notorious. In the Boulia district of Northern Queensland the girl is compelled to intercourse with a number of men.[3] Among the Dieri of South Australia a ceremony called

[1] The service of the *hierai* is discussed by Ramsay, *op. cit.*, 135–7. See also below, p. 198.

[2] On the other hand it must not be forgotten that at a marriage among the Auziles and the Nasamonians the guests who enjoyed the bride's favours were expected to reward her with a gift. Similarly, in modern Europe, a gift is also found as the return for a kiss or a dance with the bride. I have collected several cases in *Legend of Perseus*, ii. 361, 355–8, and many more might be added. Compare the Suahili custom mentioned below, p. 197.

[3] Roth, *Ethnol. Studies*, 174.

Wilpadrina is performed on the young women when they come to maturity, in which the elder men claim and exercise a right to them, and that in the presence of the other women.[1] The Arunta and Ilpirra tribes in the centre of the continent perform a ceremony on every girl when she arrives at a marriageable age, but before she has been taken over by the husband to whom she has been allotted. As part of that ceremony a number of men have access to her in ritual order; and the intercourse is often repeated the following day.[2] Analogous proceedings are known in other parts of the world. The central tribes of New Ireland have a women's house in every village. When a girl attains puberty she withdraws into a small house, called *mbak*, built inside it. There it is said she has to remain for ten months, only going outside at night. During this period she is waited upon by the old women, and through their intervention every man who chooses has access to her. On leaving the *mbak* she belongs only to the husband to whom she has probably been betrothed since infancy.[3] In the west of the island of Serang between Celebes and New Guinea, a girl after ceremonial bathing goes round clothed with a sarong woven of the fibre of the *Pandanus repens*, at the service of every man until her family have collected the necessary materials for a feast. In certain districts, however, before actual puberty the teeth are filed. When this operation is completed, a feast is prepared of which the novice must taste everything. Further, an earthen pot filled with spring water is covered with a fresh pisang-leaf. One of the old women then taking the index-finger of the girl's right hand thrusts it through the leaf as 'a symbol of the rupture of the hymen, or to show that the possession of virginity means nothing for her'. The leaf is then displayed on the ridge of the roof. This done, the women fall to eating and drinking. When they have finished they begin singing to the accompaniment of drums. The men are then admitted to the house. In some villages the old men have free access that evening to the room of the girl in whose honour the feast is given, while the other guests amuse themselves with singing outside. After this celebration the girl is entitled to free intercourse with men, even

[1] Howitt, *Native Tribes*, 664; *J. A. I.*, xx. 87. See also Ploss-Bartels, *Das Weib*, i. 308.

[2] Spencer and Gillen, *Native Tribes*, 92.

[3] *Globus*, xci. 313.

before puberty.[1] In east-central Africa the Azimba maiden is artificially deflowered during a period of retirement and instruction in the forest. When the retirement is over she celebrates her attainment of puberty by a dance in which only women take part. That night a man, hired by her father for the purpose, sleeps with her, and once this is done she is supposed to have no further intercourse with him. Often, however, she is already married before puberty, and consequently no longer a maiden. None the less is she taken from her husband that the puberty customs may be performed. When she is brought back he himself sleeps with her apparently as a ritual act, without the necessity of hiring a man for the purpose.[2] Among the Wanyasa, or Mang'anja, at the southern end of Lake Nyasa, ceremonies are performed similar to those of the *Intonjane* (girls' puberty ceremonies) of South Africa, and every girl on her return after the initiation must find some man 'to be with her', otherwise she will die.[3] The *Intonjane* among the Kaffirs is well known to be an occasion of sexual indulgence. It may be surmised that the ceremonies of the Suahili on the east coast were originally similar to those just mentioned. But the Suahili have become partially Arabized, though their Mohammedanism is little more than a veneer over their heathen customs and belief. Among them now a girl returns from her seclusion in silence and gives her hand to every man she meets, receiving from him in return a few small coins.[4] It is said that the girls of the Wamegi, also a tribe near the coast, are artificially deflowered at puberty by certain old women.[5] Artificial defloration at puberty is also practised by the Sawu Islanders. The Sakalava girls in Madagascar perform it on themselves in case their parents have not previously taken the trouble.[6] Other examples could be cited, but the subject need not be pursued.

I would venture to suggest then that the Babylonian rite was

[1] Riedel, *De Sluik- en Kroesharige Rassen*, 138, 137.

[2] H. Crawford Angus in *Zeits. f. Ethnologie*, xxx. Verhandl., 479.

[3] Duff Macdonald, *Africana*, i. 126; Jas. Macdonald, in *J. A. I.*, xxii. 101.

[4] H. Zache, in *Zeits. f. Ethnol.*, xxxi. 76. About thirty years ago a French writer cited by Hertz (*Die Sage vom Giftmädchen*, 41) reported that among the Bafiote of the Loango Coast the girls were led round the village and their virginity put up to auction. This looks like a puberty rite of a similar character. I have not seen the book, however, and think it not impossible that the writer may have misunderstood the ceremony usual on emerging from the 'paint-house'.

[5] *J. A. I.*, xxxi. 121.

[6] Ploss-Bartels, *Das Weib*, i. 307, 308.

a puberty rite, and that a maiden was not admitted to the status and privileges of adult life until she had thus been ceremonially deflowered. Among those privileges, and the chief of them, was the gratification of the sexual instinct. It was, therefore, a prerequisite to marriage. Ceremonial defloration of the bride by others than her husband has prevailed in many places. When marriage follows closely after puberty it is difficult to determine whether the custom really belongs to the puberty rites, or to those of marriage. I am not concerned here to deny that among many peoples who practise it as part of the marriage rites it may have been such *ab initio*. The determination of this question would involve an examination of marriage customs extending far beyond the space at my disposal. But it will be admitted that as puberty rites gradually became simplified or altogether obsolete such a custom could only maintain existence as part of the marriage rites. It is then usually performed by one or more of the bridegroom's friends or by an appointed official, and ultimately degenerates into the *jus primae noctis* vested in some powerful personage, as a lord or priest. Nothing of the sort appears in the accounts which have come down to us of the ancient rite in Western Asia. In all of them (save among the Lydians) emphasis is laid on the performance by a stranger. At Babylon, as we have seen, our information does not connect the rite with marriage at all. Elsewhere it is referred to not as part of the marriage rites, but as a preliminary to marriage.

That such a rite should be found annexed to the temple and worship of a luxurious goddess causes no surprise; on the contrary, it is what might have been anticipated. Every reader will call to mind numerous examples of archaic rites which have become attached to Christian festivals, and of Christian shrines which are simply shrines of an earlier religion adopted and consecrated afresh under Christian names. The difficulty of uprooting old customs, and their consequent incorporation and adaptation by advancing culture or a new religion, are phenomena too well known to be insisted on here. It is probable that other customs, such as the prostitution of the Armenian girls at the temple of Anaitis, or that of the Lydian and Paphian girls to earn their dowries, are no more than the adaptation of a custom common enough in the lower barbarism, by which unmarried girls have unfettered liberty in their sexual relations. The Armenian maidens, at all events, though spoken of as

harlots by Strabo, do not seem to have exercised their calling for money, nor to have admitted indiscriminately to their favours all who offered. They reserved themselves for their equals in rank, and entertained them in their dwellings with more hospitality than in a spinsters' house in the Pacific Islands. The surmise may be indulged that it was in fact originally, if not in later times, their way of choosing husbands. The Lydian girls are expressly said to have bestowed themselves in marriage.

Mannhardt contended (and his opinion is so far endorsed by Dr. Frazer) that the maidens who surrendered their virginity in connexion with the cult of a goddess like Aphrodite did so in imitation of their divinity, as her representatives, the human players of her part.[1] This may have been the mode by which the ancient custom was adapted to the newer order of things. But it is submitted that it is a very insufficient account of it. The custom must have been older than any definite belief in the goddess's habits or any story of her various intrigues. Are we then to suppose that it was a magical rite designed to promote the fertility of animal and vegetable life? Such rites are known in both hemispheres. The great goddess worshipped under different names throughout Western Asia personified, we may concede, the reproductive energies of Nature. Many of the rites employed in her cult are in the last analysis magical, and had for their purpose to assist those energies. By a well-known mental process magical efficacy is often ascribed to acts and usages not essentially of a magical, nor indeed of a ritual, character. Thus the general prostitution of young girls to earn their dowries, and that of widows—customs which are probably of quite a different origin—are among certain tribes of Morocco held to be not without their effect on the abundance of the crops.[2] Such a belief may have consecrated lives of habitual harlotry in Armenia, in Lydia, and in Cyprus. It by no means follows that every rite performed in the name of the goddess acquired that meaning, still less that that was its primitive meaning. Many such rites would be wholly personal. They would be intended to secure personal blessings to the worshipper, and nothing more, though every one might have been required to perform them. It is needless to suppose without express evidence that the rite described by Herodotus as taking place at the temple of Mylitta had more than a personal reference.

[1] Mannhardt, *Wald- und Feldkulte*, ii. 284; Frazer, *Adonis*, 21 note.

[2] *Rev. Hist. Rel.*, xli. 315.

The most difficult of all the problems connected with the rite is to explain why it must be accomplished with a stranger. The difficulty, however, is not peculiar to the interpretation here suggested. If, as has been alleged, the act of defloration of a maiden were held to be in itself dangerous, it is not easy to say why any one, even a stranger, should undertake it, unless he were strangely ignorant of the risk or strangely careless. In some places, indeed, a maiden who had come to submit to the rite may have been outwardly indistinguishable from one of the *hierai*; and hence the man may have been unconscious of his risk, or may have been willing to undertake a risk thus diminished. But at Babylon the women who came thus to offer themselves wore a distinctive head-dress of cords, the emblem, perhaps, of their condition of virginity. Moreover, they seem to have been penned in enclosures divided from each other by ropes, which were broken to let them out for the accomplishment of the rite. There was therefore no mistake as to their status or object. On the other hand, if the defloration simply involved ritual impurity such as could be removed by the proper ceremonies, it must be asked why the task was left to a stranger. None of our ancient authorities have condescended to define a stranger. We are probably to understand by that term one who was not an inhabitant of the town or who was not a member of the community. The analogy of certain Australian rites already referred to, and of rites of marriage in some other parts of the world, would lead us to suppose that what was really intended in the first instance was one who was not eligible for sexual relations with the woman in the ordinary course. Thus in Peru and New Granada 'the nearest relations of the bride and her most intimate friends' are said to have performed the corresponding rite[1]; and even her father is credited with the labour among the Orang-Sakai of the Malay Peninsula, the Battas of Sumatra, the Alfoers of Celebes, and on the island of Ceylon and the eastern Moluccas.[2] From this the more developed morality of the Babylonians would recoil. Mr. Crawley, commenting on the Australian rite, surmises that in it 'initiation' and marriage are one, and that 'initiation' ceremonies (that is to say, puberty ceremonies) 'of this kind are marriages to the other sex in abstract'.[3] The surmise follows from his theory of the danger of human contact, and especially of marriage, and the impor-

[1] Garcilasso, i. 59.

[2] Ploss-Bartels, *op. cit.*, 406; Hertz, *loc. cit.*, citing authorities.

[3] Crawley, *The Mystic Rose*, 348.

tance of ceremonies to avert the peril. The theory itself—at all events pushed to the length to which Mr. Crawley pushes it—is very questionable. But defloration at puberty, whether natural or artificial, is undoubtedly (whatever else it may be) a formal introduction to sexual life. Such introduction might be the more authoritative and emphatic if given by one (or more) with whom sexual relations would not in future be sustained. It is a ritual act. Ritual acts are acts out of the ordinary course—often clean contrary to the ordinary course. Therein consists their essence, their virtue. But in the growth of civilization, with the emergence of a new religion or different customs, the real meaning of a traditional rite is obscured, the rite itself becomes decadent, and a new meaning is assigned to it. Hence a puberty rite might easily become part of the cult of a goddess like Mylitta.

At the stage of decay which the rite had reached at Babylon and elsewhere in Western Asia, the proviso that the person with whom the act was performed must be a stranger might be intended to prevent an assignation. When the act had to be performed as a sacrifice in honour of the goddess it might be regarded as a profanation to perform it as an act of inclination with a favoured lover. The best way to prevent this would be to require that it should be performed with a chance stranger, who might further be looked upon, if Mannhardt's interpretation be correct, as a representative sent by the goddess to play Adonis to the maiden's Aphrodite. The rite at Byblus lends countenance to this conjecture. It is supported also by the artificial defloration enacted only in symbol by Roman brides, but in grim earnest at the temples of Siva by brides in Southern India. From a sacrifice of this kind it is only a step to the substitution of the priest for the image of the god, and the way is opened to the abuses of the *jus primae noctis.*

The conjecture thus presented is offered for what it may be worth. It fits the interpretation of the rite as a puberty ceremony, and raises, I think, no fresh difficulties. Whether it is a satisfactory solution of the problem depends on the exact purport of the rite regarded as a preparation for sexual relations: a question demanding far more space to investigate than can be conveniently occupied here.

Since writing the above I have had an opportunity of reading Professor Cumont's note on the subject of religious prostitution in his recent work, *Les Religions Orientales dans le Paganisme Romain,*

pp. 143–286. He makes no distinction between the three customs of sacrifice of virginity, prostitution to earn a dowry, and a life of religious prostitution in the service of the goddess. He refers them all to the primitive constitution of the Semitic tribe, and explains them as a modified form, become utilitarian, of an ancient exogamy. Mating with a virgin, he holds, resulted in defilement; therefore she was given first to a stranger; only after that could she be married to a man of her own race. I pass by the confusion between the three customs in question, to all of which his explanation will not equally apply. But if the explanation be correct for any of them, either the ancient exogamy of the Semites must have been quite different from exogamy as generally understood, or it must have been not merely modified but transformed. Exogamy, as generally understood, has nothing to do with race or nationality. It is simply the savage rule corresponding to our table of prohibited degrees.[1] A man may not marry or have sexual relations with one who is akin to him; every member of his clan (not of his tribe or his race) is akin to him; therefore, he cannot marry or have sexual relations with any member of his clan. The origin of this rule is still disputed by anthropologists, and we need not here discuss it. But since exogamy bars a man from sexual relations with every member of his kin, it is obvious that it cannot be merely a preliminary to marriage within the kin. Where exogamy is the law, the bar is absolute; it is the law for the whole of life; it is not intended to provide for a temporary union outside the kin in order to prepare the way for a permanent union within the kin. Exogamy, therefore, I submit, cannot explain these customs.

[1] I am reminded by the editor that among many savages additional prohibited degrees exist side by side with exogamy strictly so called. In my view these, where they exist, are supplementary rules of subsequent growth. In any case exogamy operates in the same way as our prohibited degrees.

AUSTRALIAN PROBLEMS

By ANDREW LANG, M.A., LL.D.

The Puzzle of One Totem to One Totem Marriage.

Our chief authorities on Australian institutions, Messrs. Spencer and Gillen and Mr. Howitt, have not, I think, offered any speculations on one of their most remarkable discoveries. This is the rule of 'one totem to one totem marriage'. As described by our authors, this amazing law appears to be out of harmony with all our speculative conclusions concerning the rise and development of exogamy. For example, let the inquirer read Mr. Howitt's "Summary of Limitations" (on marriage) in *N. T. S. E. A.*, pp. 282–6. Space forbids me to quote the whole of these pages, but Mr. Howitt says (p. 282): 'There is *first of all*[1] the segmentation of a whole community into two exogamous intermarrying moieties, thus limiting the choice of a wife to one half of the women in a tribe,'—while parents do not marry their children, nor brothers their sisters. Next there is the limitation to the *Noa*, *Nupa*, or *Unawa* sets of potential husbands and wives; the range of potentiality varying in various tribes. Then there are the systems of four sub-classes, and of eight sub-classes; the field of choice being thus progressively limited. 'When we turn to the totems, we find that there also this system of limitations obtains, for in some tribes marriage is only permitted between certain totems on either side, and not, as for instance in the Dieri, between any of the totems on one side, and any of the totems on the other. This again limits the number of women otherwise available.'

An example of the limitation of certain totems on one side to certain totems on the other is given by Mr. Howitt in the case of the southern Urabunna (pp. 93, 187, 188).[2] 'The table is evidently

[1] My italics.

[2] Mr. Howitt's source is Mr. J. Hogarth, of whom (if I do not misunderstand him) he says that 'my correspondent had not their scientific training or wide knowledge of the subject'. 'They' are Messrs. Spencer and Gillen (p. 282). As many tribes, including the Wonkanguru, apply the same titles, such as

imperfect', he says, but, clearly enough, some totems may marry into two or even three totems in the opposite phratry, and vice versa. This limitation appears to me to be only a form or germ of the four sub-class system. The Buntamurra tribe (with female descent) has that system; and, as the tribesman who gave information averred that 'certain totems belonged to his sub-class', he must also have conceived that only certain totem kins could marry into certain other totem kins (Howitt, pp. 113, 114, 226–7). When Mr. Howitt tells us that among the southern Urabunna (the Yendakarangu) 'the rule is that certain totems of the one class are assigned to certain totems of the other' (p. 187), he seems to me to indicate at least the germ of the four-class system as it is understood by his Buntamurra informant, who, as Mr. Howitt shows, misunderstands it (p. 227).

Leaving out of view the *local* limitations of the Kurnai and others, we have now seen all the limitations presented by Mr. Howitt—*in his Summary*. They have, he concludes, 'the effect, no doubt intended, of preventing marriages of persons of too near flesh. All these complicated and cumulative restrictions were certainly made intentionally to meet a tribal sense of morality' (p. 283).

Mr. Howitt, in his Summary, we see, has omitted the strangest and most stringent of all reported limitations prevailing among tribes which he regards as in the first and second grades of primitiveness. The northern Urabunna with two phratries, no sub-classes, and 'group-marriage' (so styled), also the Itchumundi and Karamundi 'nations' (some ten tribes, cf. pp. 49, 50), and, apparently, 'some' of the Barkinji tribes (?),[1] have two phratries, female descent, and no sub-classes, but none the less possess the greatest number of limitations, and offer by far the most restricted field of choice in marriage. Though they have two phratries, they do not limit the choice of a wife to 'one half of the women in a tribe' (p. 282). They have exactly as many intermarrying exogamous divisions as there are totems in the tribe (pp. 189, 194). One totem, say Eagle Hawk in the Mukwara phratry, may only

murdu, and *kamir*, to 'both class' (phratry) 'and totem' (p. 91), it has occurred to me that the northern Urabunna informants may have been speaking, not of totems, but of sub-classes of animal name, each including three or more totems. A misunderstanding might thus arise between the informants and the inquirers.

[1] I am not certain that Mr. Howitt intends to include any Barkinji. See pp. 189, 194.

marry into one totem, say Emu, of the Kilpara phratry. For the same rule among, at least, the northern Urabunna, see Messrs. Spencer and Gillen, *N.T.C.A.*, p. 60 and note 2; *Northern Tribes C.A.*, p. 71, and Howitt, p. 188, where Mr. Spencer tells Mr. Howitt that the northern Urabunna 'were very emphatic' on this rule.

'In the first place' (that is, in the first place after the phratry limit), say Messrs. Spencer and Gillen concerning the Urabunna (*Northern Tribes*, p. 71), 'men of one totem can only marry women of another special totem.' How can we be sure that the phratry division (Matthurie and Kirarawa) is prior in institution to the limitation of one totem to one totem, which is placed second? If there were no phratry divisions at all, the results would still be as at present, one totem can only marry into one other totem. Elsewhere (*N.T.C.A.*, p. 60, note 1) our authors write: 'The fundamental fact is that men of one moiety of the tribe must marry women of the other.' That is a fact—no one totem existing in both moieties—but is it 'the *fundamental* fact'? Surely the fundamental fact is that men of one totem must only marry women of one other totem.

Though they state this rule, our authors write, on the same page, that among the Urabunna tribe, 'division has not proceeded beyond the formation of the two original exogamous moieties.' By their own account, however, division has proceeded so much further that, out of, say, sixteen totem kins, one totem kin can only marry into one other totem kin, in the opposite phratry. There are thus, *in all*, not, as among the northern Arunta, eight exogamous sets, but sixteen exogamous sets; there are more, if there are more than sixteen totems. Each totem is, practically, a phratry.

Now this amazing law is reported only from tribes very 'primitive'. We do not know but that it is the earliest rule of all. In any case it is very early; consequently some very 'primitive tribes' outdo the most advanced eight-class tribes in the stringency of their regulation. The inevitable result is to promote marriages among 'people of near flesh'. If the Gordons could only marry the Forbeses, as Eagle Hawk can only marry Emu, then manifestly Gordons and Forbeses would become practically of the same blood. But *they* are large populous clans. How many persons are comprised in the two exogamous and intermarrying totem kins? Very near kin they must all be; so where is the sentiment of tribal morality against their unions?

Granting that our information about these tribes is correct, what

becomes of all our theories about exogamy? I have read no comments on the facts beyond my own expressions of conjecture in *The Secret of the Totem*, pp. 185, 186. Take the theory of Mr. Spencer, Mr. Howitt, Mr. Frazer, and Mr. Hartland. A previously 'undivided commune' bisects itself, for reasons variously guessed at, into two exogamous intermarrying moieties. In each there somehow were (or have come to be) so many distinct totem kins. Why do men next bind *pairs* of these kins to exogamy and intermarriage with each other alone? If that rule, on the other hand, prevailed *before* the bisection, why was the bisection made, leaving the intermarrying and exogamous pairs of totems precisely in their old position? What valuable novelty was introduced by the bisection?

Suppose, on the other hand, that the phratries (as in my hypothesis) result from an alliance, with *connubium*, between animal-named groups previously independent and probably hostile; each local group containing members by female descent of several other animal-named groups. For what conceivable purpose, in that case, were the scattered members of so many groups obliged to be exogamous and intermarrying *in pairs* of totem kins, and never out of the opposed unit of the pair?

I can, it is true, conceive a state of affairs which might produce, first, the one totem to one totem rule; next, the phratry divisions, and the partition of the totems between the phratries. But though the state of affairs whence these results might naturally flow is conceivable, and possible, it seems far from probable. However, I give it.

1. Suppose local groups of animal names, exogamous and hostile.

2. Suppose that captive women do not retain and bequeath to their children, their original group names. The Emu group, Bee group, &c., consists wholly of Emus, Bees, and so on in each case.

3. Becoming necessarily consanguineous, each pair of groups become friendly, and establish peaceful *connubium*, Snake with Swan, and so on.

4. All one set of paired groups become allies, taking a name, say Eagle Hawk, for their little confederacy, but still, like many extant tribes, observing the one totem to one totem rule in marriage. The corresponding set of groups (B) passes through the same processes, and finally strikes up friendship with Group A. Call the second group Crow.

5. We now have a *tribe*, consisting of Phratry A (Eagle Hawk) and Phratry B (Crow). They retain these names; and thus are a *Mukwara-Kilpara tribe*. But the pairs, say Swan in Eagle Hawk, Snake in Crow, still (as among the Northern Urabunna) intermarry only with each other. The arrangement is stupid, but not more so than the Northern Urabunna custom.

We have then one totem to one totem marriage. A difficulty is that I cannot see why, on this supposition, the names of the two groups, say Dog and Duck, should descend in the female line. I have satisfied myself, at least, with an explanation of that peculiarity, in the system set forth in *The Secret of the Totem*, but I can imagine no cause of it on this theory. Or is this the reason? The two, say intermarrying groups, Dog and Duck, were in separate localities. The object is to interfuse them in amity. If male Dog marries female Duck, and the children taking the paternal totem name are Dogs, and if when male Duck marries female Dog the children are Ducks, then Dog group and Duck group are *not* interfused; Dogland is Dogland, Duckland is Duckland for ever; the groups remain separate entities. This is avoided by the reckoning of descent in the female line.

This new suggestion, like my suggestion in *The Secret of the Totem*, gives a natural human cause for the phratries, and for the presence of totem kins within the phratries, while it accounts for the alleged one totem to one totem, and one set of totems to another set of totems, surviving from an older age into that of the phratries of to-day.

I have generously presented a guess to explain the origin of one totem to one totem marriages, on the supposition that the institution really exists. Perhaps it is not invidious to say that Mr. Spencer's assertion of the emphasis with which the northern Urabunna attest its existence is more satisfactory evidence than the testimony of Mr. Boultbee to the same rule in the Itchumundi, Karamundi, and Barkinji (?) nations, owing to the great experience of Mr. Spencer. In matters so difficult, however, and in languages where the words for totem, and 'class' (phratry) are apt to be the same, it is not impossible that even Messrs. Spencer and Gillen may have been misunderstood, and therefore misinformed, by their native friends.

The idea that there exists an institution limiting marriage of members of one totem kin only to members of one totem kin only

in the opposite phratry, or exogamous half of the tribe ; and the idea that, in other tribes, three or four totem kins in one phratry are limited to marriage with three or four totem kins only in the opposite phratry, is by no means new. In Messrs. Fison's and Howitt's *Kamilaroi and Kurnai* (1880) Mr. Fison quotes Mr. Lockhart, who was intimately familiar with the Mukwara-Kilpara tribes of the Darling River more than fifty years ago. Mr. Lockhart wrote (no date is given), 'The females of the Wild Duck (totem), we shall say, are all (by phratry) Kilparas (Crow), and they take Mookwara men of the Emu.'

If Mr. Lockhart means that men of the Emu totem, of Mukwara phratry, married *only* women of the Wild Duck totem in Kilpara phratry, we have here one totem to one totem marriage. But he goes on, 'The Kilpara Wild Duck boys look out for, say, Mookwara Emu girls.' The word 'say' throws doubt on his intention to assert that the Kilpara Wild Duck boys could marry only Muquara Emu girls, and no other Mukwara girls (*Kam. and Kur.*, p. 43).

Mr. Fison does not seem to have pressed his inquiries to the point of asking whether Mr. Lockhart really asserted the existence of one totem to one totem marriage. He did learn, from Mr. Stewart, that any man of any totem of Kumite (Cockatoo) phratry in the Mount Gambier tribe, could marry a woman of any totem in the Kroki phratry of the same tribe, as among many tribes.

Mr. Fison was strongly of opinion that, in several tribes, marriage was limited to men of X totems of A phratry with women of X totems in B phratry. Mr. Daniel M'Lennan, in his brother's *Studies in Ancient History* (p. 596, Second Series), spoke of Mr. Fison's belief 'that where a division' (phratry) 'includes several totems, and there is no marriage within the division' (phratry) 'the totem puts a further restriction on marriage'—as a mere dream. Such evidence as we receive from Mr. Howitt and Messrs. Spencer and Gillen confirms Mr. Fison's belief (if he entertained it) that one totem to one totem marriage does exist in many tribes. Mr. Fison even held that sets of totems intermarriageable only with each other, in phratries Kilpara and Mukwara, are 'analogous' to the four sub-classes of the Kamilaroi, and to the four sub-classes of Queensland tribes with the phratries Yungaru and Wutaru. (*K. and K.*, pp. 41–2.) Mr. Fison, I think, was arguing in the right direction. But he held that the phratries came first of all, and were later 'subdivided' into sets of totems still further limiting marriage.

On this head, as I cannot make out what Mr. Fison conceived the origin of totem kins to be (apparently he thought them deliberately introduced 'classes' intended to limit marriage, though why they bear animal names he saith not), it is not necessary to say more.

Let us next try how one totem to one totem marriage can be explained on the theory of bisection.

A previously 'undivided communal horde' is legislatively bisected into two exogamous intermarrying divisions, say Crow and Eagle Hawk.

Why is this done?

Is it (1) to satisfy 'tribal morality', and, if so, how has the 'tribe' become moral?

Is it (2) to limit by 50 per cent. the chances of murderous rivalries in love?

Is it (3) to prevent some supposed ill consequence to intermarrying uterine brothers and sisters—and also to 'tribal' (or rather phratriac) brothers and sisters?

Is it (4) from a felt need of organization of one kind or another, at random?

Are there already totems in the undivided community, and, if so, how can the horde be called undivided? We must mean matrimonially undivided.

Are there no totems, and, if so, whence and wherefore did they come? From magical societies? I can point out the difficulties of this idea.

If there are totems, why are they so arranged that the same totem is never on both sides of the division (save among the Arunta)?

Why have phratries of translatable names got animal names?

Were the opposed totems, from the first, intermarriageable only in pairs, and, if so, why?

Were they originally all intermarriageable with all totems on the opposite side?

If so, why did certain very primitive tribes later compel one totem of one side to marry only one totem on the other side? Mr. Howitt writes[1] (p. 189): 'The restriction in marriage to one or

[1] I must give the whole of Mr. Howitt's sentence, which I may misapprehend. 'The restriction in marriage to one or more totems is certainly later in origin than the Dieri rule, and, as will be seen by my further statements, in many tribes with two-class divisions.' I understand Mr. Howitt to mean 'later than the Dieri rule, and *than the rule which prevails* in many other tribes with *only* two-class divisions'.

more totems is clearly later in origin than the Dieri rule.' 'Sub-classes' are universally supposed to be later, but what proves that the one totem to one totem rule is later?

We seem lost in a wilderness of difficulties!

II. *Animism and Nescience of Procreation.*

When heaven, to punish the sins of the learned, permitted Messrs. Spencer and Gillen to discover and describe the institutions of the Arunta nation, it was found that these tribes practised an unheard-of kind of totemism. The totem was not hereditary, the totem-set of people in each case was not exogamous; a man who was a Dog might marry a woman who was a Dog, and their children might be Rat, Cat, and Frog.

Instantly some of the learned (A) averred that this unheard-of form of totemism was the oldest extant and the nearest to the primitive model; while others (B) declared that the Arunta totemism was a decadent 'sport', and showed how it arose, or might have arisen, out of exogamous totemism and hereditary totems. I was of the second party, the B division, from the first.

The A division, who regarded Arunta totemism as the earliest, naturally tried to show that, in other matters, the Arunta nation was the most primitive. The Arunta wore no clothes, and they were ignorant of the fact that sexual connexions are the cause of conception and birth—what *could* be more primitive? They also practised co-operative totemic magic; and co-operation, duly organized, may be more primitive than individual effort; the division of labour being also primitive.

To this the opposite faction (B) replied that the Arunta (1) exhibited confessedly the most complex, and, as had hitherto been agreed, the latest form of matrimonial rules, the 'eight-class system'. Next (2), they reckon descent and transmit hereditable property in the male line, and hitherto we had unanimously supposed reckoning in the female line to be the earlier. Next (3), they had lost the names of their primary exogamous divisions (phratries), and, hitherto, these names had been looked on as very early. Next (4), they practised the bloody rites of initiation which Mr. Spencer thinks posterior in evolution to the south-eastern dentistry. (5) The Arunta have no 'All Father', and while the A

disputants thought this a proof of primitiveness, the B party held that the animistic philosophy of the Arunta had left no logical *raison d'être* for a creative 'All Father'. (6) The B faction held that co-operation and division of labour, each totem-set doing magic for its own totem, were not primitive, but much the reverse.

The A party admitted the social advance of the Arunta to the eight-class system. Advance, however, is not uniform; a tribe might reach the eight-class system, but be primitive in other respects. As to Arunta male descent (hitherto looked on as a proof of advance), the A party suggested that one tribe might begin with male descent, and another with female descent, though we have irrefutable proof that, in other northern tribes of the eight-class system, female descent has left indelible traces, and no proof that male descent has ever become female descent.

The Arunta philosophy of reincarnated spirits, entertained, with modifications, by tribes of female descent near Lake Eyre, and by the northern tribes, with male descent, is entirely animistic. Among the Arunta, at the beginning of things, rudimentary animated bulks of lacustrine environment were converted by two beings named 'Self-existing' or 'Made out of Nothing' (Ungambikula) into animal forms of known species. One of these beings might be styled either 'a man-kangaroo' or 'a kangaroo-man'. They went about playing their pranks and founding rites and institutions, carrying decorated stone *plaques*, called *churinga*, still used by the Arunta. Their bodies died, but their immortal part haunted the stone *churinga*. These immortal spirits, the Arunta say, cause conception by entering into women who pass the places where the *churinga* were deposited. Thus every Arunta has been, in the spirit, from the beginning, and will endlessly be reincarnated. Consequently sexual connexion does not cause conception and birth.[1] How could it? A baby is to the Arunta only a being who has been from the beginning—now in the flesh, and now out of it—and who will so continue to be. Such a spiritual entity cannot conceivably owe his existence to gross material amours. The thing, to an Arunta philosopher, is unthinkable. For this philosophic reason, says party B, the Arunta ignore procreation. A man cannot beget an everlasting spirit. 'No,' says party A; 'the Arunta are too primitive to understand physical processes which are sufficiently understood by other savages.'

[1] Spencer and Gillen, *Central Tribes*, p. 265.

For example, certain tribes of south-eastern Australia, including some who reckon descent in the female line, hold that 'children originate solely from the male parent, and only owe their infantine nurture to their mother'. 'A woman is only a nurse who takes care of a man's children for him.'[1] But matrimonial life, among the Arunta, is supposed, at most, only to prepare a woman for the entrance of a spirit which has existed from the beginning, the *Alcheringa*. Therefore the Arunta are in pristine ignorance of physiology.

I have argued, often and in many places, that the Arunta nescience of the part of the male in procreation need not be a proof of absolute ignorant 'primitiveness', but merely the logical result of their animistic philosophy. Their psychology has clouded their physiology. Every one of them, according to their elaborate philosophy (which surely no mortal can think 'primitive'), has existed since the beginning and can never cease to exist.

No efforts of men and women can produce a spirit which, they say, is pre-existent and of endless existence. The logical black fellow, granting his premises, can come to no other conclusion than that human beings—incarnate spirits—do not beget pre-existing spirits. Their speculations deal with the spirit, *forma formans*, neglecting to account for the body of flesh. There is nothing 'primitive' in all this; there is only logic working on the basis of animism, or so it seems to me.

As far as I am aware, nobody except M. van Gennep, who believes in Arunta 'primitiveness' has tried to meet my argument, or even made it the subject of an allusion.[2] But I have seen many grateful references to Dr. Roth's discovery of denial of human procreation by other tribes, a discovery set forth in his Bulletins on *North Queensland Ethnography* (No. 5, 1903). In most references to Dr. Roth which I have seen, the details of his discoveries were not fully discussed. I therefore discuss them; they show that an animistic philosophy, differing in many points from that of the Arunta, colours and even causes the Northern Queensland denial of procreation. When North Queensland peoples say that the lower animals have no spirits or souls, and that *they* may be and are the

[1] Howitt, *J. A. I.*, 1882, p. 502; *N. T. S. E. A.*, pp. 283–4.

[2] M. van Gennep, indeed, urges that the spirits of the Alcheringa folk have not existed from the beginning. They are as old as the beginning, for the Alcheringa *is* the beginning. (*Mythes et Légendes d'Australie*, p. lxv, note 3.)

result of procreation; whereas mankind, having spirits, are not and cannot be procreated, but are made or created, then we have to confess that, in the case of mankind, the North Queensland psychology has clouded the Queensland physiology. The North Queensland tribes know the method of the procreation of the lower animals. What they deny is that physical procreative processes can produce man, who has a soul, who is a living spirit. I have been unaware that the Queensland blacks draw this essential and illuminating distinction between man and beast, because, till lately, I had never been able to procure Dr. Roth's Bulletin No. 5.

Dr. Roth says, 'Animals and plants are not regarded as having any "Koi"—spirit or soul.'[1] 'Although sexual connection as a cause of conception is not recognized among the Tully River blacks so far as they themselves are concerned, it is admitted as true for all animals; indeed this idea confirms them in their belief of superiority over the brute creation.' Connexion can make a brute; 'to make a *man's* beyond its might,' as Burns says, for man is a living spirit.[2]

These passages prove, I hold, beyond possibility of doubt, that the animistic or spiritual philosophy of these blacks, *and nothing else*, causes them to deny that sexual connexion is the agency in the making of man. They have to invent other ways.

I have always conjectured that 'These things are not otherwise, but thus', that psychology has darkened physiology among these logical thinkers, and now my conjecture is established, as far as Dr. Roth's tribes are concerned. They understand the physical processes of procreation among all the other animals, but these animals have no soul or spirit, have nothing immaterial. Man, on the other hand, has an essential, immaterial part, his *Koi*, or soul. The physical and material processes which account for the reproduction of soulless brutes cannot account for the births of spiritual men. *They* must 'come otherwise'. Manifestly the North Queensland blacks have come across an old enigma of speculation, which they solve in their own way. The enigma is, How could beings clearly material acquire an immaterial indwelling spirit?

Even Dr. Roth, who gives us the facts, does not appear always to understand their bearing on the denial of procreation among men and women. He writes (Bulletin No. 5, pp. 23, § 83): 'When it is remembered that as a rule in all these Northern tribes a little

[1] *Bulletin* No. 5, pp. 17, § 64.
[2] *Bulletin* No. 5, pp. 22, § 81.

girl may be given to and will live with her spouse as wife, long before she reaches the age of puberty—the relationship of which to fecundity is not recognized—the idea of conception not being necessarily due to sexual connection becomes partly intelligible.' But nothing has been said about human conception not being *necessarily* due to sexual connexion. It has been said that human conception cannot be due to connexion at all; for the reason that material processes cannot produce a *koi* or soul, or spirit. This opinion is not 'partly intelligible', but entirely intelligible, and, given the black's premisses, is his only logical conclusion.

How a human child comes the blacks tell us, and Dr. Roth gives us their theory. Just as the Eternal, in *Genesis*, formed a figure of clay, and breathed into it a living spirit, so, according to the blacks, before each new human birth, an invisible being makes a doll of mud, informs it with a living spirit, and conveys it into the womb of its mother.

This process—men are not created, nor begotten, but made—and not material procreation, accounts among these blacks for *human* births. Meanwhile the soulless animals reproduce each other in the usual way. This conclusion, or something like it, is forced upon the black thinker by his belief that man is a body enshrining a living spirit, while a brute is a body enshrining nothing of the sort; the beasts perish.

This philosophy is the reverse of 'primitive'; it does not indicate pristine ignorance, but the logical invention of the spiritualist philosopher. It took him long, doubtless, to evolve the idea of spirit from his experiences of dreams, trances, coincidental death-wraiths, hallucinatory phantasms of the dead, crystal-gazing, *vue à distance*, or clairvoyance, and hypnotism. Man was not 'primitive' when he had amassed and speculated on all these experiences, and had recognized himself as a spiritual being, encased in clay. He was not primitive when he patiently and logically worked out his complex animistic philosophies, varying in different tribes. Some south-eastern tribes have not worked out their psychology to its necessary conclusions; they have discovered the physical causes of procreation, and do not trouble to inquire, 'Whence and how comes the informing spirit?' The northern nations, on the other hand, have resolutely pushed their animism to its necessary conclusion, and deny that material processes produce the spirit of man.

Let us consider in detail the psychology of our dark fellow subjects. On the Tully River the spirit (*Koi*) is associated with shadow and breath; is intangible ('a spirit hath not flesh and bones'), practises rapping (like other spooks) after leaving the body, haunts its old home and friends, finally its address is 'The Bush'. It is everlasting ('so far as the blacks have any conception of the term'), does not feed, has no gifts or sacrifices of food; and is rather dangerous to persons whom it encounters. Phantasms of the dead may be seen by individuals, or in a collective hallucination experienced by several persons at once. But 'animals and plants have no *Koi*'. (Query—'*Kohin*, a glorified and deified black fellow', cf. Howitt, pp. 497–99.) On the Blomfield River, and at Cape Bedford, dogs have 'thinking powers', and have *wau-wu*, which is equivalent to *Koi*; the term is apparently an onomatopoeic word for 'breath'.

On the Pennefather River, *Ngai and Cho-i* (*Koi*) are connected with the heart and the 'after-birth', not with the breath. (*Cho-i* seems to be *Koi*, I think.) No one has a *ngai* till the death of his father by blood, when the paternal *ngai* passes into all his children. When none of the kin are left alive, the *ngai* 'finishes altogether'. But every one has also a *cho-i*, which a mythical being, *Anje-a*, the baby-maker, puts into a doll of mud, before inserting the doll, spirit and all, in the maternal body. The *cho-i*, like the Arunta *alcheringa* spirit, is constantly reincarnated. Part of it leaves the body at death, and becomes a wandering phantasm, but another part remains in the 'after-birth'. The after-birth is buried by the grandmother in a marked place, whence *Anje-a* takes the *cho-i*, and he keeps it in a lagoon, a rock crevice, or a tree, till he needs it. When baby-making, he takes the spirit or *cho-i* from its hiding-place, inserts it in his mud doll, and puts the mud doll, *cho-i* and all, in the maternal body. The child's hunting-ground is the region where *Anje-a* kept it till he thus used it. 'Animals and plants have neither *ngai* nor *cho-i*,' and procreate in the recognized way. The names for *cho-i*, and for the supernormal baby-maker, vary in different tribes. The *cho-i* is thus permanently existent, and perpetually reincarnated, like the *alcheringa* spirits among the Arunta.

This belief is much akin to that of the Euahlayi, where Moon and Crow are the baby-makers. But the Euahlayi do not admit reincarnation, except in the case of the spirits of children who

die uninitiated. The spirits of the adult dead go to their own place, good or evil, or are reincarnated in birds. The Euahlayi recognize the advantages of the procreative assistance of the male. 'To live, a child *must have an earthly father*; that it has not, is known by its being born with teeth.'[1]

The Queensland philosophy has this advantage over the Arunta theory, that it accounts for the material body in which the reincarnated spirit appears. The body is made of mud, or of pandanus roots, by the baby-maker, *Anje-a*, or *Nguta Nguta*, *alias Talpan*, or *Kunya*, all of them beings who haunt wood and water. On the Tully River babies also come by suggestion, 'some man may have told the woman to be in an interesting situation,' or in consequence of a dream, or she has caught a bull frog, or sat over a fire on which she has roasted a bream given to her by the child's 'prospective father'. Babies are made beyond the sunset, and enter the mother as plovers or snakes, resuming their human form when settled.

It appears that there is considerable variety in the hypotheses of these blacks as to birth. They have not the serene orthodoxy of the Arunta. However, their reason for denying procreation in the human race, while admitting its existence among the lower animals, has been made conspicuous. These people do not err from ignorance, but in obedience to their philosophy of animism.

If the Arunta suppose that even among the brutes conception has not its natural cause, the reason is also philosophic. All spirits were during the Alcheringa encased in animal forms, man-kangaroo or kangaroo-man. A kangaroo totem spirit therefore may as readily enter a female kangaroo as a woman of the kangaroo totem. But I am not positively certain that a female kangaroo is believed never to become pregnant except through the invasion of a spirit from a kangaroo *Oknanikilla*, or mortuary local totem centre.

My conclusion is that among tribes who believe in perpetual reincarnation of each practically everlasting spirit, the denial of procreation is not a 'proof of pristine ignorance', but a philosophic inference from philosophic premisses. If I am right 'conceptional totemism' among the Arunta cannot be pristine. It is a theory logically drawn from the philosophic conception that each unceasing spirit was originally a totemic spirit, and continues to be the same totemic spirit through all its reincarnations. Where savage thinkers

[1] Mrs. Langloh Parker, *The Euahlayi Tribe*, pp. 50–1.

have not worked out this or some similar philosophical theory, there is no 'conceptional totemism', as far as I am aware. If we would argue that conceptional totemism is the earliest, and has been the universal, form of the institution, we must assume that mankind, everywhere, once held that every human being born is born of the spirit; and that mankind, in all known places except some regions in Australia, abandoned that opinion. Proof of this hypothesis there can be none, and such a universal uniformity of adhesion to one of the endless forms and phases of animistic philosophy is contrary to all that we know of philosophers, early or late. They are never all agreed in one system. All known savages have reached the belief in spirits, but, as far as we are aware, not all savages have applied the spiritual theory in their myths of the origin of totemism. That application, as far as we know, has only been made in Australia, by many tribes, and various sets of tribes differ much in the form of their theory. Some, having always made totems hereditary and exogamous, retain that system, and explain it by various forms of the animistic belief. Others, having drifted, for obvious reasons, into non-hereditary, and non-exogamous totemism, plus the stone *churinga* creed, have accounted for all that by another twist of speculation; these are the Kaitish and Arunta.

Their myth was never universal; it is limited to the region in which stone *churinga* are common implements.

So far I had written, with a good deal of confidence, when my attention was drawn, by Mr. N. W. Thomas, to the following passage from a letter by the Rev. Mr. Strehlow, who has long lived as a missionary among the Dieri and the southern Arunta, and is able to speak and write the languages of their tribes. He says (*Globus*, vol. xci, p. 289): 'If a woman perceives the first signs of pregnancy immediately after seeing a kangaroo which disappears before her eyes, she is certain to become the mother of a kangaroo child. If the signs are perceived after a hearty meal of some fruit, she has conceived a child which has that fruit as totem.' This statement precisely confirms the theory of Mr. J. G. Frazer stated by him in the *Fortnightly Review*, September, 1905, and is, perhaps, the most surprising anticipation of facts later discovered by research that has been made since the theoretical finding of Neptune. But there are some points as to which I am uncertain. Is a *spirit* supposed to emanate from the kangaroo or the hearty meal of fruit?

As the Arunta nation notoriously get their totem otherwise, namely from totemic spirits haunting *oknanikilla*, is this myth a sporadic variant? No search, one may presume, is made for the *churinga nanja* of the child when born under this variant myth. Do the people who entertain the myth vary, in any other ways, from Arunta orthodoxy? Mr. Frazer added, among other adminicles of evidence in favour of his theory, that it explained why the great majority of Central Australian totems are edible objects. But that is not strange, for the Central Australian finds all plants and animals edible, except a very few insects (*Northern Tribes*, pp. 768–73). They can easily eat Karti, a full-grown man, or Thaballa, a laughing boy, totems of the Warramunga and Tjingilli. They cannot eat the Wollungua, a totem, nor even see him, as he does not exist. So how did he thrive to totem's estate, unless, perhaps, a woman thought she saw him?

The argument is not aided by the intermingling in the same community of men and women of many different totem stocks, for that is caused by exogamy with female descent, and again is caused by the *Oknanikilla* system, among the Arunta. The strength of the argument for conceptional totemism is the discovery by Herr Strehlow of its actual existence. But is the myth animistic? If so, is it probable that all totemic mankind have held by this phase of animistic philosophy? Here we are once more in the region of probabilities. It remains odd that no woman or girl totem, and only two human totems, are known, though mothers are just as likely to have seen females of their species at the critical moment, as a kangaroo, or a dish of fruit.

The theory of conceptional totemism rests, as Mr. Strehlow's evidence proves, on a *vera causa*. There is no absolute reason, prima facie, why conceptional totemism should not have been universally the origin of the belief that children were actually identical with the various objects in nature whose names and natures they acquired at birth. But, if we start from the hypothesis that these processes have been primary and universal, we encounter difficulties in tracing the further evolution of totemic institutions which cannot be discussed here, but which, to myself, seem insuperable, at least on the theory of the legislative bisection of a community containing animal-named sets of kindred, or magical societies, not previously exogamous.

IS TABOO A NEGATIVE MAGIC?

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It is always easier to criticize than to construct. Many affirmative instances usually go to the founding of an induction, whereas a single contradictory case suffices to upset it. Meanwhile, in anthropology, it will not do to press a generalization overmuch, for at least two reasons. The first of these reasons is the fundamental one that human history cannot be shown, or at any rate has not hitherto been shown, to be subject to hard-and-fast laws. Hence we must cut our coat according to our cloth, and be fully content if our analysis of the ways and doings of man discloses tendencies of a well-marked kind. The second reason is that, in the present state of the science, field-work, rightly enough, predominates over study-work. Whilst the weather lasts and the crop is still left standing, garnering rather than threshing must remain the order of the day. Working hypotheses, therefore, the invention of theorists who are masters of their subject, are not so plentiful that we can afford to discard them at the first hint of an exception. If, then, some one comes forward to attack a leading view, it is not enough to arm himself with a few negative instances. It is likewise incumbent on the critic to provide another view that can serve as a substitute. In the present case I have sought to do this after a fashion, though I am painfully aware that, in defining taboo by means of *mana*, I am laying myself open to a charge of explaining *obscurum per obscurius*. I can only reply prophetically that the last word about *mana* has not yet been said; that it represents a genuine idea of the primitive mind, an idea no less genuine and no less widely distributed than the idea of taboo, as several writers have recently suggested, and as further investigation will, I believe, abundantly confirm. I would also rejoin that if the accusation of *obscurum per obscurius* hardly applies directly to the theory I am criticizing—since to identify 'magic' with the sympathetic principle yields a perfectly definite sense—yet the natural associations of the word are so much at variance with this abstract use of the name of a social institution

that the expression 'negative magic' is more likely to cause confusion than to clear it up.

So far back as when Dr. Tylor published his epoch-making *Researches into the Early History of Mankind* we find the suggestion put forward of a certain community of principle between taboo and that 'confusion of objective with subjective connexion' which 'may be applied to explain one branch after another of the arts of the sorcerer and diviner, till it almost seems as though we were coming near the end of his list, and might set down practices not based on this mental process as exceptions to a general rule.'[1] 'Many of the food prejudices of savage races,' continues Dr. Tylor, 'depend on the belief which belongs to this class of superstitions, that the qualities of the eaten pass into the eater. Thus, among the Dayaks, young men sometimes abstain from the flesh of deer, lest it should make them timid, and before a pig-hunt they avoid oil, lest the game should slip through their fingers, and in the same way the flesh of slow-going and cowardly animals is not to be eaten by the warriors of South America; but they love the meat of tigers, stags, and boars, for courage and speed.'[2]

Recently[3] Dr. Frazer has universalized Dr. Tylor's partial correlation, and has pronounced 'the whole doctrine of taboo' to be a negative magic, understanding by magic a misapplication of the association of ideas by similarity and contiguity. A very similar definition had already been proposed by MM. Hubert and Mauss.[4] They limit the identification, however, to what they name 'sympathetic taboo', implying that taboo includes other varieties as well. Again, although here they seem to make the sympathetic principle the differentia of magic, the final gist of their admirable essay is rather to find this in the anti-social character ascribed to the magician's art.

Now, according to the foregoing view, taboo is a ceremonial abstinence based on the fear of definite consequences. Just as sympathetic magic says, 'As I do this, so may that which this symbolizes follow,' taboo says, 'I must not do this, lest there follow that which is the counterpart of this.'

In violent contrast we have the view of Dr. Jevons, which, at

[1] *Op. cit.*, 3rd edit., 129. [2] ib. 131.

[3] *Lectures on the Early History of the Kingship*, 52.

[4] *L'Année Sociologique*, vii. 56. It is to be noted that Dr. Frazer arrived at his conclusion by independent means; cf. *Man*, 1906, 37.

first sight at any rate, seems to declare all consideration of consequences to be foreign to the taboo attitude. He bases his theory of taboo on an alleged 'fact that among savages universally there are some things which categorically and unconditionally must not be done', insisting 'that this feeling is a "primitive" sentiment'.[1] Now it is not easy to discover what is here meant, so great is the departure from the recognized terminology of philosophy. 'Categorically' and 'unconditionally' are expressions that smack of Kantian 'rigorism'; but Kant's famous analysis of duty as a categorical and unconditional imperative makes obligation directly antagonistic to sentiment of all kinds. A sentiment as such has a history and assignable development. The Kantian law of duty, *a priori*, objective, absolute, has none whatever. Is Dr. Jevons, then, speaking here strictly according to philosophic tradition? Or would he recognize a growth of moral principle, say, on some such lines as those which Dr. Westermarck or Mr. Hobhouse has recently laid down? If he were of the former persuasion, then he would be irrelevantly interpolating a non-genetic view of morality that for purposes of psychological and sociological explanation could have no value or significance at all. But if he is of the other and less uncompromising faith—which appears more probable, seeing that his book is professedly dealing with religion from the historical standpoint—then 'categorical' and 'unconditional', in their application to a mere sentiment, are to be given an elastic sense. No more is meant, we must in that case suppose, than that the taboo feeling of 'Do not meddle' involves no very explicit condition, no very clear or specific idea of unpleasant consequences to be avoided, but as it were threatens by aposiopesis—'Do not meddle, or, if you do, . . . !' If this is as much as Dr. Jevons intends—and it seems at any rate to be all that is meant by MM. Hubert and Mauss when they speak in very similar terms of the absolute, necessary, and *a priori* character of the 'magical judgement'[2]—then I think this view has very much to be said for it.

My own contention is that, whilst there is always a sanction at the back of taboo in the shape of some suggestion of mystic punishment following on a breach of the customary rule, yet the nature of the visitation in store for the offender is never a measurable quantity. Even when the penalty is apparently

[1] *An Introduction to the History of Religion*, 85.
[2] *Op. cit.*, vii. 125.

determinate and specific—which, however, is by no means always the case, as I shall endeavour to show later—an infinite *plus* of awfulness will, I believe, be found, on closer examination, to attach to it. Taboo, on my view, belongs, and belongs wholly, to the sphere of the magico-religious. Within that sphere, I venture to assert, man always feels himself to be in contact with powers whose modes of action transcend the ordinary and calculable. Though he does not on that account desist from attempting to exploit these powers, yet it is with no assurance of limited liability that he enters on the undertaking. In short, dealings with whatever has mystic power are conducted at an indefinite risk; and taboo but embodies the resolution to take no unnecessary risks of this indefinite kind. This contention I shall now try to make good.

First, to attack the theory that taboo is negative magic (in Dr. Frazer's sense of the term 'magic') on the side on which that theory is strongest, namely where sympathy is most in evidence. I do not for one moment deny that in some taboos a sympathetic element is present and even prominent. Indeed, I see no harm in speaking, with MM. Hubert and Mauss, of sympathetic taboo, where 'sympathetic' stands for the differentia or leading character of a variety, and the genus 'taboo' is taken as already explained in independent terms. The presence of the sympathetic principle is, to my mind, amply and crucially proved in the case of those food restrictions mentioned in the passage quoted from Dr. Tylor, the prohibition to eat deer lest one become timid, and so on. Another telling set of examples is provided by those remarkable taboos on the use of knots which, as Dr. Frazer has abundantly shown, are wont to be observed at critical seasons such as those of child-birth, marriage, and death.[1] But even here, I suggest, the consequences tend to remain indefinite and vague, and that for more than one kind of reason.

We can distinguish a sociological reason and a hierological or religious reason, though for the purposes of the historical study of religion, from the standpoint of which taboo is usually considered, the first may be treated as subordinate to the second.

To begin with, these, no less than any other taboos, are customary observances, a portion of the unwritten law of society. To this fact, then, must be ascribed part at least of the force that renders them effective. There are always penalties of a distinctively

[1] *The Golden Bough*[2], i. 392 sqq.

social kind to be feared by the taboo-breaker. In extreme cases death will be inflicted; in all cases there will be more or less of what the Australian natives call 'growling',[1] and to bear up against public opinion is notoriously the last thing of which the savage is capable. Moreover, this social sanction is at the same time a religious sanction. To speak the language of a more advanced culture, State and Church being indivisibly one, to be outlaw is *ipso facto* to be excommunicate. Given the notion of mystic danger—of which more anon—social disapproval of all kinds will tend to borrow the tone and colour of religious aversion, the feeling that the offender is a source of spiritual peril to the community; whilst the sanctioning power remains social in the sense that society takes forcible means to remove the curse from its midst.

It may be argued that these social consequences of taboo-breaking are secondary, and thus scarcely bear on the question of the intrinsic nature of taboo. Such an objection, however, will not be admitted by any one who has reflected at all deeply on the psychology of religion. On the broadest of theoretical grounds religion must be pronounced a product of the corporate life—a phenomenon of intercourse. Confirmation *a posteriori* is obtained by the examination of any particular taboos of which we have detailed information. Take, for example, the elaborate list of food-restrictions imposed amongst the Arunta on the *ulpmerka* or boy who has not yet been circumcised.[2] The sympathetic principle is probably not absent, though its action happens here not to be easily recognizable. When we learn, however, that eating parrots or cockatoos will produce a hollow on the top of the head and a hole in the chin, we may suspect that the penalty consists in becoming like a parrot or cockatoo. On the other hand, the same penalty, for instance premature old age, follows on so many different kinds of transgression that it looks here as if a tendency to dispense with particular connexions and generalize the effects of mystic wrong-doing were at work. Meanwhile, in regard to all these taboos alike our authorities assure us that the underlying idea throughout is that of reserving the best kinds of food for the use of the elder men, and of thereby disciplining the novice and teaching him to 'know his

[1] Cf. B. Spencer and F. Gillen, *The Native Tribes of Central Australia*, 196.

[2] Spencer and Gillen, *op. cit.*, 470 sqq. Here, by the way, in the systematic assignment of penalties to offences we seem to have a crucial disproof of the pure 'unconditionality' of taboo.

place'. Here is a social reason with a vengeance. Even if some suspect that our authorities over-estimate the influence of conscious design upon tribal custom, they will hardly go the length of asserting that sympathy pure and simple has automatically generated a code so favourable to the elderly *gourmet*. A number of succulent meats to be reserved on the one hand, a number of diseases and malformations held in dread by the tribe on the other, and possibly a few sympathetic connexions established by tradition between certain foods and certain diseases to serve them as a pattern—with this as their pre-existing material the Australian greybeards, from all we know about them, would be quite capable of constructing a taboo-system, the efficient cause of which is not so much mystic fear as statecraft. Even if the principle of sympathy lurk in the background, we may be sure that the elders are not applying it very consciously or very strictly; and again we may be sure that society in imposing its law on the *ulpmerka* is at much greater pains to make it clear that he must not eat such and such than why he must not—if only because there are so many excellent reasons of a social kind why the young should not ask questions, but simply do as they are bidden.

But there is, I believe, another and a deeper reason why sympathy pure and simple cannot account for taboo. Taboo, I take it, is always something of a mystic affair. But I cannot see why there should be anything mystic about sympathy understood, as Dr. Frazer understands it, simply as a misapplication of the laws of the association of ideas. After all, the association of ideas is at the back of all our thinking (though by itself it will not account for any of our thinking); and thinking as such does not fall within the sphere of the mystic. Or does the mystery follow from the fact that it is a 'misapplication' of the laws aforesaid?[1] Then the savage must be aware that he is misapplying these laws; for taboo is for him a mystic affair. But if he knows he is indulging in error, why

[1] Dr. Frazer writes, *Lectures on the Early History of the Kingship*, 53. 'It is not a taboo to say, "Do not put your hand in the fire"; it is a rule of common sense, because the forbidden action entails a real, not an imaginary, evil.' It is not a taboo, but a rule of common prudence, for the savage. But not for the reason alleged. In his eyes there is nothing imaginary, but something terribly real, about the death or other disaster he observes to overtake the taboo-breaker. How, then, does he come to bring this kind of evil under a category of its own? Surely it ought to be the prime concern of Anthropology to tell us that.

does he not mend his ways? Clearly Dr. Frazer cannot mean his explanation of magic or of taboo to be an explanation of what it is for the savage. Now, perhaps he is entitled to say that magic, in his sense, is not a savage concept or institution at all, but merely a counter for the use of the psychology that seeks to explain the primitive mind not from within but from without. He is, however, certainly not entitled to say that taboo is not a savage concept or institution. In Polynesia *tapu* is a well-recognized term that serves as perhaps the chief nucleus of embryonic reflection with regard to mystic matters of all kinds; in some of the islands the name stands for the whole system of religion.[1] Moreover, from every quarter of the primitive world we get expressions that bear the closest analogy to this word. How then are we to be content with an explanation of taboo that does not pretend to render its sense as it has sense for those who both practise it and make it a rallying-point for their thought on mystic matters? As well say that taboo is 'superstition' as that it is 'magic' in Dr. Frazer's sense of the word. We ask to understand it, and we are merely bidden to despise it.

If, on the other hand, we cast about amongst genuine primitive notions for such as may with relative appropriateness be deemed equivalent to the idea of magic, as that idea is to be understood and employed by a psychology that tries to establish community between savage and civilized thought, we have the choice between two alternative types.

My own preference is for those primitive expressions that are definitely dyslogistic or condemnatory, as when we speak of the 'black art'. The clearest cases that I know are Australian. Thus the *arungquiltha* of the Arunta is 'associated at bottom with the possession of supernatural evil power'.[2] Perhaps we may say broadly that, as contrasted with *churinga*, the term stands for magic as opposed to religion—for magic, that is, as the witch-haunted England of the seventeenth century understood it, namely as something anti-social and wholly bad. The Kaitish *ittha* seems to be the exact analogue of *arungquiltha*[3]; and so do the *muparn* of the Yerklamining,[4] the *mung* of the Wurunjerri,[5] and the *gubburra* of the

[1] Cf. E. Tregear, *Maori-Polynesian Comparative Dictionary*, s.v. *tapu*.
[2] Spencer and Gillen, *op. cit.*, 548 n.
[3] Spencer and Gillen, *The Northern Tribes of Central Australia*, 464 n.
[4] A. W. Howitt, *The Native Tribes of South-East Australia*, 450.
[5] *Op. cit.*, 365.

Yuin.[1] In all these cases the notion seems to be that of a wonder-working of a completely noxious kind. Amongst the Arunta a man caught practising such magic is severely punished, and probably killed.[2]

Some, however, might choose rather to assign the meaning of 'magic' to the wonder-working in general, and not simply to its bad variety. Thus amongst the last-mentioned Yuin 'evil magic' may be practised by the *gommera* or medicine man; but in this tribe he is the leader of society, and a wielder of good supernatural power no less than of evil. The wonder-working power he possesses goes by the comprehensive name of *joia*, translated 'magic' by Howitt, and described as an 'immaterial force' set in motion not only by the *gommera* but also by certain sacred animals.[3] Here we seem to have a case of that very widespread notion of which the most famous representatives are the *mana* of the Pacific and the *orenda* of the Iroquois. A good deal of attention has lately been paid by anthropologists to these latter expressions, and I may perhaps be permitted to take certain of their findings for granted. It would appear that the root-idea is that of power—a power manifested in sheer luck, no doubt, as well as in cunning, yet, on the whole, tending to be conceived as a psychic energy, almost, in fact, as what we would call 'will-power'.[4] Further, though it may be that every being possesses its modicum of *mana*, the tendency is for the word to express extraordinary power, in short a wonder-working.

Now between the ordinary and the extraordinary, the work-a-day and the wonderful is a difference, if you will, of degree rather than of kind. The sphere of the miraculous is, subjectively, just the sphere of a startled experience, and clearly there are endless degrees in the intensity of felt surprise; though society tends to fix hard-and-fast limits within which surprise is, so to speak, expected of one. How the savage proceeds to differentiate the normal from the

[1] *Op. cit.*, 372.

[2] Spencer and Gillen, *Native Tribes*, 536.

[3] *Op. cit.*, 533, 560–1.

[4] It is very interesting to note, as Tregear's excellent dictionary, s.v. *mana*, enables one to do at a glance, how the root *mana* underlies an immense number of the terms by which psychical faculties and states are rendered. Thus in Samoan we find *mana'o* to desire, wish, *manatu* to think, *manamea* to love, *atuamanatu* to have a good memory; in Tahitian *manao* to think, *manavaru* eager desire; in Hawaiian *manao* to think, *mananao* thought, *manaoio* to believe, *manaiva* feelings, affections; and so on.

abnormal was brought home to me in the course of an interview I was accorded by the Pygmy 'chief' Bokane.[1] I was trying to verify Col. Harrison's statement [2] that if a Pygmy dies suddenly the body is cut in two to see whether or not the death is caused by *oudah*—the 'devil', as Col. Harrison renders it, though, for my part, I could not discover the slightest trace of personality attaching to this evil principle.[3] I asked Bokane how his people told whether the death was due to *oudah* or not. He replied that, if an arrow-head or a large thorn were found inside the body, it was an arrow or a thorn that had killed the man; but, if nothing could be found, then *oudah* must have done it. If a dangerous animal killed a man, I learnt on further inquiry, it was not *oudah*, but it was *oudah* if you cut your finger accidentally. When strange sounds were heard in the forest at night and the dogs howled, that was *oudah*. On some such lines as these, then, we may suppose other savages also to have succeeded in placing the strange and unaccountable under a category of its own. In the case of *mana* and *orenda* I am inclined to think that the core of the notion is provided by the wonderful feats—wonderful to himself, no doubt, as well as to his audience—of the human magician; which notion is then extended to cover wonder-working animals, nature-powers, and the like by an anthropomorphism which is specifically a 'magomorphism', so to say. Of course other elements beside that of sheer surprise at the unusual enter into the composition of a predominant notion such as that of *mana*, which in virtue of its very predominance is sure to attract and attach to itself all manner of meanings floating in its neighbourhood. For example, as the history of the word 'mystic' reminds us, the wonderful and the secret or esoteric tend to form one idea. The Australian wonder-worker owes no little of his influence over the minds of his fellows to the fact that in most tribes an exhibition of his power forms part and parcel of the impressive mystery of initiation. Let it suffice, however, for our present purpose to identify *mana* with a wonder-working power such as that of the magician—a power that may manifest itself in actions of the sympathetic type, but is not limited to this type, being all that for the primitive mind is, or promises to

[1] I spent about five hours in all in private talk with the Pygmies, assisted, I need hardly say, by an interpreter, at Olympia in London, Jan. 8 and 9, 1907.

[2] *Life among the Pygmies*, Lond. 1906, 20.

[3] Nothing, apparently, is done to avert or propitiate *oudah*. Bokane denied that the pots of honey placed at the foot of trees were for *oudah*.

be, extraordinarily effective in the way of the exertion of personal, or seemingly personal, will-force.

Now, if 'magic' is to mean *mana* (which, however, is not Dr. Frazer's sense of 'magic', nor, indeed, mine, since I prefer to give it the uniformly bad meaning of *arungquiltha*, that is of the anti-social variety of *mana*), then in describing taboo as negative magic we shall not, I believe, be far wide of the mark. Taboo I take to be a mystic affair. To break a taboo is to set in motion against oneself mystic wonder-working power in one form or another. It may be of the wholly bad variety. Thus it is taboo for the headman of the water-totem in the Kaitish tribe to touch a pointing-stick lest the 'evil magic' in it turn all the water bad.[1] On the other hand, many tabooed things, woman's blood or the king's touch, have power to cure no less than to kill; whilst an almost wholly beneficent power such as the clan-totem or the personal *manitou* is nevertheless taboo.[2] Indeed, it is inevitable that, whenever society prescribes a taboo in regard to some object in particular, that object should tend to assume a certain measure of respectability as an institution, a part of the social creed; and, as the law upholds it, so it will surely seem in the end to uphold the law by punishing its infraction. It is to be remarked, however, that many taboos prescribed by the primitive society have regard to no object in particular, but are of the nature of general precautions against mystic perils all and sundry, the vaporous shapes conjured up by unreasoning panic. It is instructive in this context to consult the admirable account given by Mr. Hodson of the communal taboos or *gennas* observed throughout the Manipur region.[3] On all sorts of occasions the *gennabura* or religious head of the village ordains that the community shall keep a *genna*. The village gates are closed, and the friend outside must stay there, whilst the stranger who is within remains. The men cook and eat apart from the women during this time. The food taboos are strictly enforced.[4] All trade, all fishing, all hunting, all

[1] Spencer and Gillen, *Northern Tribes*, 463.

[2] Is Dr. Frazer henceforth prepared to explain totemism on purely sympathetic principles? It would, on the other hand, be easy to show that the ideas of *mana* and of *manitou* and the like go very closely together.

[3] T. C. Hodson, 'The "Genna" amongst the tribes of Assam,' *J. A. I.*, xxxvi. 92 sqq.

[4] Some of these food taboos have a sympathetic character. Thus 'young unmarried girls are not allowed to taste the flesh of the male of any animal or of female animals which have been killed while with young', ib. 98. Even here,

cutting of grass and felling of trees are forbidden. And why these precautions? Sometimes a definite visitation will have occurred. 'Phenomena such as earthquakes and eclipses, or the destruction of a village by fire, occasion general *gennas*. . . . We also find general *gennas* occasioned by the death of a man from wounds inflicted by an enemy or by a wild animal, by the death of a man from snakebite or from cholera or small-pox, or by the death of a woman in child-birth.'[1] At other times nothing untoward has happened, but something important and 'ticklish' has to be done—the crops sown, the ghosts laid of those who have died during the year. It is a moment of crisis, and the tribal nerves are on the stretch. Mr. Hodson, indeed, expressly notes that 'the effect of *gennas* is certainly to produce in those engaged in them a tension which is of great psychological interest'.[2] Is not what he takes for the effect rather the cause of *gennas*? Anxiety says 'Let us abstain from all acts that may bring upon us the ill-will of the powers'. Anxiety sees every outlet of activity blocked by a dim shape, endowed with no definite attributes such as the sympathetic theory is obliged to postulate, but stationed there as simply a nameless representative of the environing Unknown with its quite unlimited power of bringing the tribal *mana*—its luck and cunning—to nought by an output of superior *mana*, to be manifested who knows how?

It may be objected that, whereas we have made it of the very essence of *mana* that it should be indefinite and mysterious in its effects, there can be nothing indefinite or mysterious on the Dyak view—to recur to the example from which we started—about the effect of deer-meat, since it produces timidity exactly as it might be thought to produce indigestion. Perhaps it is enough to reply that to the savage a fit of indigestion would likewise be a phenomenon explicable only in mystic terms. The common sense of the primitive man may—to take Dr. Frazer's instance—recognize that normally and as a matter of course the fire burns whoever thrusts his fingers into it; but the moment that the fire burns some one 'accidentally',

however, an element of miracle enters, unless the Manipuris find parthenogenesis no more odd than the Arunta are by some supposed to do. Another taboo is on dog's flesh, the mystic penalty being an eruption of boils. Here there is no obvious sympathetic connexion. Boils are uncanny, and have to be accounted for on mystic lines—if not sympathetically, yet by some reference to evil magic; for disease is always evil magic for the savage; cf. Spencer and Gillen, *Native Tribes*, 548.

[1] ib. 96. [2] ib. 101.

as we say, the savage mind scents a mystery. Just so for the Pygmy. His knife acts normally so long as it serves him to trim his arrow-shaft. As soon, however, as it slips and cuts his hand, there is *oudah* in, or at the back of, the 'cussed' thing. Given, then, anything that behaves 'cussedly' with regularity, that is normally abnormal in its effects, so to speak, and a taboo or customary avoidance will be instituted. It becomes the duty of society to its members to keep before their eyes the nature of the direful consequences attending violation of the rule. Society shakes its head solemnly at careless youth, and mutters μορμώ. Careless youth does not believe all it is told, yet is nevertheless impressed and, on the whole, abstains. Kafir children must not eat certain small birds.[1] If they catch them on the veld, they must take them to their grandparents, who alone may eat the body, though the children are given back the head. 'If the parents catch children eating birds on the veld, they tell them they will turn out witches or wizards when they grow up.' Here we have the mystic sanction. And there is a social sanction in reserve. 'The boys naturally get sound thrashings from their fathers, who feel it their duty to prevent their sons from turning out abandoned wretches in after life.' Nevertheless, youth is sceptical, or at any rate intractable. 'Children do not see the logic of this rule, and consequently try to eat the bird on the veld, when they think they will not be found out. . . . There is no time when boys and girls are so free from observation as when watching the fields; consequently, at such times they have glorious feasts off the birds they catch.' Now the sympathetic principle may underlie this food taboo, or it may not, but clearly by itself it is not enough to account for the customary observance in the concrete. Society has to keep the taboo going, so to say; and to keep it going it relies partly on the *vis a tergo* of brute force, but still more on the suggestion of mystic evil in store for the offender, not an imaginary evil, *pace* Dr. Frazer, but what is quite another thing, an evil that appeals to the imagination, an indefinite, unmeasured, pregnant evil, a visitation, a doom, a judgement.

Hitherto we have had in view mainly such cases of taboo as seemed most closely bound up with the sympathetic principle, minor matters of routine for the most part, outlying and relatively isolated portions of the social system, which for that reason might be ex-

[1] Dudley Kidd, *Savage Childhood, a Study of Kafir Children*, 193.

pected to contain their own *raison d'être* unaffected by the transforming influence of any higher synthesis. If, however, we turn to the major taboos of primitive society, the classical wellnigh universal cases of the woman shunned, the stranger banned, the divine chief isolated, and so on, how infinitely more difficult does it become to conceive sympathy, and sympathy only, as the continuously, or even the originally, efficient cause of the avoidance. Unfortunately, considerations of space utterly prohibit a detailed treatment of matters covering so wide an area both of fact and of hypothesis. It must suffice here to assert that the principles already laid down will be found to apply to these major taboos with even greater cogency. Here, too, there are at work both a social and a mystic sanction (so far as these can be kept apart in thought, the mystic sanction being but the voice of society uttering bodings instead of threats). As for the mystic sanction, we shall probably not be far wrong if we say that the woman has *mana*, the stranger has *mana*, the divine chief has *mana*, and for that reason pre-eminently are one and all taboo for those who have the best right to determine the meaning of taboo, namely those who practise and observe it.

If there were room left in which to consider these taboos in some detail—the three notable cases mentioned do not, of course, by any means complete the list of taboos of the first rank[1]—it might turn out that in our running fight with the upholders of the sympathetic theory serious opposition must be encountered at certain points, yet never so serious, let us hope, that it might not be eventually overcome.

Thus the first case on our list—that of the taboo on woman—provides our opponents with a really excellent chance of defending their position. There can be no doubt that a sympathetic interpretation is often put upon this taboo by savages themselves. Mr. Crawley, who has made the subject of what he terms the sexual taboo peculiarly his own, brings forward evidence that, to my mind at least, is conclusive on this point.[2] Among the Barea man and wife seldom share the same bed, the reason they give being that 'the breath of the wife weakens her husband'. Amongst the Omahas if a boy plays with girls he is dubbed 'hermaphrodite'. In the

[1] Thus one of the most notable and widespread of taboos is that on the dead. Sympathetic interpretations of this taboo are by no means unknown amongst savages, but it would not be hard to show that they do not exhaust the mystery of death, of all human concepts the most thickly enwrapped in imaginative atmosphere.

[2] E. Crawley, *The Mystic Rose*, 93, cf. 207 sqq.

Wiraijuri tribe boys are reproved for playing with girls, and the culprit is taken aside by an old man, who solemnly extracts from his legs some 'strands of the woman's apron' which have got in. And so on in case after case. Here clearly what is primarily feared is the transmission of womanly characteristics, in a word, of effeminacy. Mr. Crawley even goes so far as to speak of the belief in such transmission as 'the chief factor in sexual taboo'.[1] Whether this be so or not,[2] he likewise shows, with singular clearness and force, that it is not the only factor. Owing, he thinks, to a natural nervousness that one sex feels towards the other, as well as to the unaccountable nature of various phenomena in the life-history of woman such as menstruation and child-birth, the notion of her as simply the weaker vessel 'is merged in another conception of woman as a "mysterious" person . . . She is more or less of a potential witch'.[3] With this I cordially agree, and shall not labour the point more except to the extent of asking the question, How, on the hypothesis that what is dreaded is simply the transmission of womanliness, are we to account for the fact—to quote but the best-known story of the kind—that when an Australian black-fellow discovered his wife to have lain on his blanket he wholly succumbed to terror and was dead within a fortnight?[4] Only a twilight fear, a measureless horror, could thus kill. And to show how mixed a mode of thought prevails as to the workings of the sanction set in motion, in a very similar case from Assam it is not the man but the woman who dies of fright.[5]

The case of the taboo on strangers seems at first sight to afford a clear proof of the effect of mere strangeness in exciting dread, especially when we compare the results of contact with novelties of all kinds. Dr. Jevons, however, argues that 'strangers are not inherently taboo, but, as belonging to strange gods, bring with them strange supernatural influences'.[6] In support of this view he

[1] ib. 207.

[2] Mr. Crawley does not tell us on what principle he would proceed to estimate predominance as between such factors. I should have thought that the moral of his excellent study, abounding as it does in psychological insight, was to lay stress on the subconscious grounds of action rather than on the reasons whereby more or less *ex post facto* the dawning reflection of the savage seeks to interpret and justify that action. I myself believe the sympathetic explanation to be little more than such an *ex post facto* justification of a mystic avoidance already in full swing.

[3] ib. 206. [4] *Journ. Anth. Inst.*, ix. 458. [5] Hodson, *op. cit.*, 100.

[6] *An Introduction to the History of Religion*, 71.

instances the fact that new-comers are frequently fumigated to drive away the evil influences they bear in their train. But, after all, there are no taboos that religion has not learnt to neutralize by means of one or another ceremonial device. Woman, for example, is inherently taboo, yet with proper precautions she may be married.[1] So too, then, strangers may be entertained after a purifying ceremony. It by no means follows, however, that they have lost all their mystic virtue, any more than it follows that woman has ceased to be mysterious after the marriage ceremony. Witness the power to bless or to curse retained by the stranger within the gate—a matter for the first time brought clearly to light by Dr. Westermarck's striking investigation of the religious basis of primitive hospitality.[2] Meanwhile, even if Dr. Jevons's contention were to be granted that the taboo on strangers is really a taboo on the tabooed things he may have been in contact with, it is hard to see how the sympathetic explanation of taboo is going to be stretched to cover the indefinite possibility of definite sympathetic contagions of all sorts. We are left asking why mere uncertainty in itself can rouse imaginative fears—a line of inquiry that must presently lead to the conclusion that mere strangeness in itself can do the same.

The third of our cases—that of the tabooed chief—need not detain us long. At all events in Polynesia, the eponymous home of taboo, they have no doubt about the explanation. The chief has *mana*, and therefore he is feared. Men do not dread contact with the king lest they become kingly, but lest they be blasted by the superman's supermanliness. Such, at least, is the native theory of the kingly taboo on its religious side. On its highly developed social side it is a fear of the strong arm of the State mingled with a respect for established authority—just as religious taboo is for the most part not all cringing terror, but rather an awe as towards mystic powers recognized by society and as such tending to be reputable.

We have cast but a rapid glance over an immense subject. We have but dipped here and there almost at random amongst the end-

[1] I accept Mr. Crawley's hypothesis that 'marriage ceremonies neutralize the dangers attaching to union between the sexes'. *The Mystic Rose*, 322.

[2] E. Westermarck, *The Origin and Development of the Moral Ideas*, i. 583 sqq. Dr. Westermarck's view, by the way, is that 'the unknown stranger, like everything unknown and everything strange, arouses a feeling of mysterious awe in superstitious minds'.

less facts bearing on our theme to see if the sympathetic principle—a perfectly genuine thing in its way—would take us to the bottom of the taboo feeling and idea. We conclude provisionally that it will not. Indefinite rather than definite consequences appear to be associated with the violation of a taboo, and that because what is dreaded is essentially a mysterious power, something arbitrary and unaccountable in its modes of action. Is, then, taboo a negative *mana*? Yes—if *mana* be somewhat liberally interpreted. Is it a negative magic, understanding by magic sympathetic action? With all my respect and admiration for the great authority who has propounded the hypothesis, I must venture to answer—No.

THE ETHNOLOGICAL STUDY OF MUSIC

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Introductory.—It is hardly surprising that the ethnological study of music has been neglected until recent times. For, in the first place, its recognition as a serious branch of scientific investigation has been very tardy. Not long ago we were all of us apt to look on primitive music just as the Greeks regarded the language of their neighbours. We now know that, disorderly and meaningless as unfamiliar language and unfamiliar music at first appear, an inherent order and a meaning are revealed after sufficient study and habituation.

In the second place, the subject has until recently demanded a worker who is alike a trained ethnologist and a musician. But within the last fifteen years, the use of the phonograph has enormously lightened the weight of musical knowledge, which the worker must otherwise take with him into the field. It is now possible for the ethnologist of very moderate musical attainments to collect phonographic records and other data of great musical interest which can be worked out by the specialist at home.

The theorist should henceforth have no cause for complaint of paucity of material. Nor need he longer rely on the unverifiable guesses and errors made by independent and often untrained observers in the field.

Contamination of primitive music.—There is hardly any other branch of ethnology where so much remains to be done, and where the opportunities for research are so rapidly vanishing beyond recall, as the study of comparative music. The borrowing and adulteration of music proceed apace. When tribes, formerly hostile, become pacified, fresh routes are opened up for the mutual exchange and contamination of different styles of primitive music. When sacred and profane European tunes are introduced by the missionary or the trader, unpolluted aboriginal music soon has a precarious existence.

We have evidence of these conditions in the influence of Arabic or Portuguese tunes introduced into Africa, and in the spread of favourite native airs throughout North America and throughout Australia.

The effectiveness of a borrowed tune amply compensates for the strangeness of the words that may belong to it. The words are commonly sacrificed to the tune. So long as the latter is acceptable, it matters little that the former are meaningless. We frequently find that liberties are taken with words, or that meaningless words or syllables are introduced into primitive music. Yet another cause of the presence of meaningless words lies in the antiquity of the music. The words become so archaic, or their sense was originally so involved or so symbolical that all meaning gradually disappears as the song is handed down from generation to generation.

The expressive function of music.—Music is a recognized means of intercommunication, and must hence be regarded as a language. But the language of music differs from verbal language in that it can communicate only emotions (or feelings), while verbal language serves for cognitive (intellectual) as well as for emotional expression. Thus when we employ words, we communicate not merely a feeling, say of joy, anger or sorrow, but also the events or ideas which are bound up in those feelings.

In expressing feelings by spoken language, our words vary in pitch according as we are making a statement or asking a question, our voice changes in loudness according as we are angry or calm, the timbre of our voice differs according as we are sarcastic or persuasive, the speed of our words and the rate of respiration alter according as we are excited or depressed. Now music, as we have said, can only communicate such states and changes of feeling. Music can awaken in us feelings of joy, excitement, sadness, resignation, courage, uncertainty and the like, but it cannot communicate to us the ideas which are the cause of such feelings. These ideas are the product of each hearer's fancy. That is to say, the language of music is devoid of acknowledged signs for *cognitive* expression.

To investigate the degree of universality of those signs in verbal and musical language which serve to communicate states of feeling, is a matter of no small interest. We would know how far the modifications of verbal language in respect of pitch, loudness, timbre and tempo serve as universal methods of communication, and similarly how far the feelings of sorrow, joy and the like, which

a given piece of music evokes in the community that produced it, are shared by the members of other communities more or less advanced in civilization.

The origin of music.—We may regard musical and verbal language as derived from a common source, namely from the tendency to give vent to feelings by vocal expression. There are, however, other theories as to the origin of music which lay stress on more special factors. One of the objects of the ethnological study of music should be the determination of the importance of these various factors.

It has been suggested, for example, that music arose from the imitation of notes of birds and other natural sounds—a conjecture closely analogous to the supposed onomatopoeic origin of verbal language. The suggestion has also been put forward that music began when primitive man vied one with the other in exhibiting his superior attractiveness before women. Other theorists, looking to the value of rhythmical music in furthering work and in dancing, and having regard to the delight taken by primitive people in the beats of the tom-tom, have laid chief stress on rhythm as the source of all music. Here, again, is a conjecture which can only be verified by the systematic study of primitive music.

Rhythm and melody.—While some examples of primitive music are characterized by a total absence of rhythm and appear to be melodic elaborations of the recitatif, in other examples rhythms of such complexity are introduced that they defy analysis by the civilized European ear. Not infrequently the accents or measures in the melody are opposed to those in the accompaniment. In India and apparently among the Arabs and certain other peoples, successive notes of very different duration are grouped together and recognized as a unit, each unit sometimes receiving a special name and having a special use according to circumstances.

Rhythm and harmony.—The widespread occurrence of complex rhythms among primitive peoples is perhaps intimately related to their generally scant feeling for harmony. In Europe the development of polyphony (in which various independent melodies are sung simultaneously) was regulated by the growing regard for consonances and dissonances. Certain tones when sounded together appeared agreeable, others were deemed unpleasant. Thus arose the distinction between consonant and dissonant combinations. The most perfect consonance is given by the octave, i.e. by two

tones whose vibration-frequencies stand in the ratio 1:2. (The number of vibrations per second determines the pitch of a tone.) The next most perfect consonance is given by the fifth, the corresponding ratio for which is 2 : 3. Then follows the fourth (3 : 4). Our attitude towards the various musical intervals has differed considerably at different stages in the history of European music. Thus the thirds, major (4 : 5) and minor (5 : 6), and the sixths, major (3 : 5) and minor (5 : 8), which are often called imperfect consonances, were not admitted as consonances until the thirteenth and fourteenth centuries. At the present day, not all the imperfect consonances are admitted into our system of harmonies. The harmonic tritone, for example (5 : 7), does not enter.

Fusion.—The degree of consonance is literally dependent on the extent to which the two tones 'sound together' (con-sonare). So complete is the fusion between a tone and its octave that even the most musically gifted people find difficulty in deciding whether two such tones are simultaneously sounding or only one. Less musical people make similar mistakes when the simultaneous tones employed are separated by a fifth, or by another less consonant interval. The less the degree of consonance, the less erroneous the decision. When the interval is distinctly dissonant, e.g. a major (8 : 9) or minor (15 : 16) second, or a major (8 : 15) seventh, there is practically complete absence of fusion.

As polyphonic music began to develop in Europe, the growing feeling for consonance and dissonance demanded that a strict uniform tempo be kept by the various executants. Clearly the harmonious effects would be utterly spoiled unless the parts were in exact time with one another. This condition was most easily attained when the accents recurred regularly and the rhythm preserved a fairly simple character.

Polyphony.—Polyphonic music is far commoner than is generally supposed in the music of other than European peoples. The purposeful use of simultaneous harmonies, especially of octaves and fifths, is not unusual among semi-civilized people. But the several parts are invariably permitted a freedom of movement which is denied to our own music, and the different simultaneous rhythms are allowed full scope for independent development. Such polyphonic music—or to adopt a more appropriate name that has been suggested, such 'heterophonic' music—surely demands of the native audience the same oscillations of attention as occur in us when we

listen to two persons talking simultaneously. Our attention turns alternately now to the one voice, now to the other, and we intentionally neglect the jarring effect of the simultaneous voices upon consciousness. For our comprehension of the sense, it matters little what times these speakers keep relatively to one another. In like manner it is not considered imperative for the individual parts of a primitive orchestra to keep a prescribed time. Variations are permissible, dictated by the taste of the performers.

Harmony in primitive music.—To what stage and by what steps the feeling for harmony has advanced among primitive people, can only be settled by systematic investigation. Attempts have been made to ascertain whether such people show a preference for consonant and a dislike for dissonant pairs of simultaneous tones, or whether they regard various pairs or triads of tones as differing in affective (e.g. exhilarating or depressing) value. But no satisfactory results have yet been obtained. It is clear that both native and European intervals should be presented, that the intervals should be sounded on native and not merely on European instruments, and that repeated judgements must be obtained before reliance can be placed on such comparisons. Other investigators have hoped to arrive at an answer by playing primitive melodies on the piano, harmonizing them now in one way, now in the other. But the likes, dislikes or indifference of the natives, ascertained by such a rough method of experiment, cannot be accepted as trustworthy.

We must bear in mind that the disorderly use of simultaneous tones in primitive orchestra or chorus does not necessarily imply an inability to distinguish between harmony and discord. One may be quite able to discriminate between two experiences, although in practice one may totally neglect the differences between them; we may, for example, give the same name to two really distinguishable objects. To argue that primitive man cannot distinguish blue from green (or salt from sweet) because he designates them by the same name would be absurd. But it is hardly less absurd to insist that the feeling for consonant intervals is absent among a given primitive people which totally disregards it in their music. It is quite conceivable that the neglect of the principles of harmony in primitive music may be due partly to the difficulties of securing exact intonation, partly to the peculiar intervals and scales which have become imposed upon them, and partly to such an uncontrolled desire for

massiveness of sound that any tendencies for putting their feeling for harmony into practice are at once repressed.

Styles and social function of music.—Some of the changes which the music of a given people has undergone in the course of its development may be revealed by a careful comparison of the older with the more modern tunes. Nearly every people, however primitive, preserves what we may term its classical music. Such music often becomes invested with a sacred character. It may be performed only in secret initiation ceremonies, or during religious observances. In this connexion the native myths regarding the origins of music and musical composition should be studied.

The position of music within a community is no doubt largely responsible for the number of coexisting styles of music, and for the degree of conservatism obtaining. When musical instruments are to be found in nearly every family as in Japan, there are many different styles of music, which are strictly confined to certain classes of performers. Where instrumental music is limited to professional players, its theory and practice are apt to be treated as secret, and are regarded as the property of the guild. Under such circumstances musical education is dependent solely on tradition, and any attempt at musical notation is discouraged. In Japan the beginnings of notation are to be seen, but the figures therein employed refer to particular instruments, e.g. to the hole which has to be unstopped on the flute, or to the fret on the guitar at which the finger has to be placed in order to produce the required note. Musical notation also exists in India and China, and was employed by the ancient Greeks and mediaeval Arabs.

Scales.—Tones may be regarded as the vocabulary of music. If we collect all the tones which a given people ever introduce into their music and arrange these tones as a scale in the order of their pitch, such a collection is analogous to a vocabulary of words. But just as not every word which is to be found in a dictionary is appropriate in a given literary work, so not every note which occurs in such a scale can be indiscriminately employed in a given piece of music.

We have thus to distinguish two kinds of scales, of which the one is obtained as described above, by collecting all the tones utilized in the various tunes of a given people, while the other is formed by collecting tones which are to be found in a single tune. We may term the former a 'general' scale and each of the latter

a 'particular' scale. The music of a given people, therefore, consists of a single general scale, and of a series of particular scales.

Now the tones which a people employ in their music are not merely dependent on their aesthetic appropriateness. Their exact pitch is in part determined by the construction of musical instruments, and by the difficulties of instrumental technique. The arrangement of the holes of flutes and of other wind instruments is sometimes dictated not by auditory considerations, but by principles of symmetry or by other determinants.

Moreover, mathematical principles have always influenced the fixation of the pitch of tones, wherever civilization has sufficiently advanced to enable calculation to do so. Among the Greeks, Pythagoras divided the string in the ratio of 2 : 3, and the Chinese shortened the pipe in the same ratio. They thus produced the interval of a fifth, and they divided the shortened pipe or string again in the same ratio, and repeated the procedure, thus obtaining a geometrical progression of fifths, bearing these relations to the initial tone:—

$$\tfrac{2}{3},\ (\tfrac{2}{3})^2,\ (\tfrac{2}{3})^3,\ (\tfrac{2}{3})^4,\ \&c.$$

Other mathematical principles have also played a part; so, too, has the mystic value of certain numbers. It remains yet to be proved by accurate observation how far many of the abstruse speculations of the mathematical theorists are actually embodied in practical music. We may hopefully look to discovering the 'natural' intervals that are employed by a given people when these controlling influences of authority and convenience are, so far as possible, experimentally removed.

We must be on our guard against placing too great a reliance on the speculations of comparatively modern theorists. In the development of European scales, for example, it would be rash to suppose that the octave has always been the distance theoretically subjected to division. The earliest Greek melodies, for example, appear to have had a much narrower compass. The tetrachord is thought to have been the first attempt at a scale in Greece. It consisted of the interval of a fourth divided into three parts. Another added tetrachord subsequently completed the octave.

The mode of construction of the particular scales is found to vary widely among different peoples, and even among the same people at different times and in different kinds of music. Most usually the octave of the particular scales is divided into five or

seven tones. The five-toned or pentatonic scale occurs in every continent. A common form of it, found, for example, in Chinese, Japanese and Scottish music, omits the fourth and the seventh, so that the octave starting from *c* runs thus :—

c *d* *e* *g* *a* *c*, the intervals of which correspond to
1 1 $1\frac{1}{2}$ 1 $1\frac{1}{2}$ of our whole tones. Our
own heptatonic scale runs :—

c *d* *e* *f* *g* *a* *b* *c*,
1 1 $\frac{1}{2}$ 1 1 1 $\frac{1}{2}$

of which the intervals between *e* and *f* and between *b* and *c* are (approximately) half the size of the other intervals.

It is not unusual to find slight deviations from an otherwise strictly pentatonic or heptatonic scale. A given tune may be obviously pentatonic or heptatonic in structure, save for the inclusion of one or two comparatively unimportant or 'grace' notes.

Many other forms of the pentatonic scale besides the above are described, of the derivation and interrelation of which we are wholly ignorant. Thus in Japan the following forms (and others) appear to be in use :—

c *d* *f* *g* *a* *c*,
1 $1\frac{1}{2}$ 1 1 $1\frac{1}{2}$

c *d* $e^{\flat}$ *g* $a^{\flat}$ *c*,
1 $\frac{1}{2}$ 2 $\frac{1}{2}$ 2

c $d^{\sharp}$ *f* $g^{\flat}$ $b^{\flat}$ *c*,
$\frac{1}{2}$ 2 $\frac{1}{2}$ 2 1

c $d^{\sharp}$ *f* *g* $a^{\flat}$ *c*,
$\frac{1}{2}$ 2 1 $\frac{1}{2}$ 2

c *d* $e^{\flat}$ *g* *a* *c*,
1 $\frac{1}{2}$ 2 1 $1\frac{1}{2}$

c $d^{\sharp}$ *f* *g* $b^{\flat}$ *c*,
$\frac{1}{2}$ 2 1 $1\frac{1}{2}$ 1

c *d* *f* *g* $a^{\flat}$ *c*,
1 $1\frac{1}{2}$ 1 $\frac{1}{2}$ 2

Many forms of the heptatonic scale were recognized in early European music, but in modern times they have become limited to two, the major and the minor. Among the ancient Greeks, for example, we find the following modes :—

(*a*) the Lydian :

c d e f g a b c,

corresponding to our major mode.

(*b*) the Ionic or Hypophrygian:

$$c\ d\ e\ f\ g\ a\ b^{\flat}\ c,$$

(*c*) the Phrygian:

$$c\ d\ e^{\flat}\ f\ g\ a\ b^{\flat}\ c,$$

(*d*) the Aeolic:

$$c\ d\ e^{\flat}\ f\ g\ a^{\flat}\ b^{\flat}\ c,$$

corresponding to our minor mode.

(*e*) the Doric:

$$c\ d^{\flat}\ e^{\flat}\ f\ g\ a^{\flat}\ b^{\flat}\ c,$$

(*f*) the Mixolydian:

$$c\ d^{\flat}\ e^{\flat}\ f\ g^{\flat}\ a^{\flat}\ b^{\flat}\ c,$$

(*g*) the Syntonolydian:

$$c\ d\ e\ f^{\sharp}\ g\ a\ b\ c,$$

and further complications, derived from these, have been described.

These different 'modes' are here written out, all beginning on *c* merely in order to facilitate comparison. Apparently the Greeks employed different modes according to the metre chosen, and they came to attach broad distinguishing characteristics to each of the modes. The Dorian mode, for example, was reputed to be severe and virile, others to be smooth, erotic, suitable for boys, and so forth. But writers differ so much in their attitude to the various modes that it is impossible to lay much stress on their opinions. It is not improbable that if we had more information as to the ways in which different kinds of music are regarded by the theorists among modern semi-civilized communities, some light might be thrown on the at present obscure views held by the ancients.

In certain forms of Arabic music and on the Scottish bagpipe, the following heptatonic scale occurs:—

	g	*a*	*b*-	*c*	*d*	*e*-	*f*	*g*,
showing intervals of	2	$1\frac{1}{2}$	$1\frac{1}{2}$	2	$1\frac{1}{2}$	$1\frac{1}{2}$	2	semitones.

It will be observed that this scale gives a neutral third of three and a half semitones, intermediate between the major and the minor thirds.

The origin of the pentatonic scale is unknown. It is easy to conjecture that after the octave the fifth (e.g. *c*—*g*) may have been the next recognized interval, and that by taking a fifth from *c* downwards—thus reaching *f*—and by raising the latter an octave, the four tones *c*, *f*, *g*, *c* may have been reached. By such means the

interval of a whole tone *f*—*g* would be also reached, and this interval, once fixed, may have been imitated by placing a tone *d* at a similar distance from *c*, and a tone *a* at a similar distance from *g*. Thus we arrive at a pentatonic scale of the form *c*, *d*, *f*, *g*, *a*, *c*.

Equal temperament.—We have just hinted that small intervals may be produced by judging equal distances. This seems actually to have determined the formation of scales in Siamese and Javanese music. The octave is here divided into seven and into five equal intervals respectively.

But while we can only dimly conjecture the causes and methods that have resulted in the construction of such 'equally tempered' intervals, it is easy to understand the origin of the similarly tempered general scale to which those of our own instruments that have fixed tones, e.g. the piano or the harmonium, are attuned. Our particular scales are almost always heptatonic, consisting approximately of five whole-tone and two half-tone intervals. These intervals, as we have said (p. 243), were once arranged in various orders, each order constituting a mode. In modern times, however, our scales have become restricted to two modes, the major and the minor, the most important difference between which consists in the interval between the first and the third tones of the scale. The major mode contains the major third (4 : 5), the minor mode the minor third (5 : 6). The intervals of our scale came at one time to be determined by the consonant relation of tones to one another. Thus the distance *c*—*g* was in the ratio 2 : 3, *c*—*f* in the ratio 3 : 4, and so on. But difficulties at once presented themselves when the scale of a melody instead of beginning on *c*, as in a previous melody, now began on *d* or *e*. A little consideration of the new ratios involved will show that such changes of key necessitate the construction of new intervals which are often not quite identical with the tones of the previous scale. It was in order to overcome this difficulty that the system of equally tempered tuning, now in vogue, was introduced. The octave is divided into twelve equal intervals of a semitone. None of the intervals, whatever be the key of the major or minor mode, exactly corresponds to the requirements of strict harmony. Every interval within the octave is a compromise which is satisfactory in so far as it allows us to employ a comparatively small series instead of an enormous number of notes, in instruments like the piano which have fixed tones.

It has been shown that, in spite of such artificial mistunings to

which from infancy our ear is exposed, musical persons still tend to sing truly consonant, instead of tempered, intervals and to play consonant intervals on instruments like the violin which have variable, instead of fixed, tones. We have consequently to recognize 'instrumental' scales, as well as the general and particular scales with which we have hitherto dealt. Further, we see how important it is to study not only the instrumental but also the vocal music of a given people.

Quarter-tones.—The Arabian theorists included quarter-tones in the scales which they constructed, and it has been stated that in Syria a scale occurs consisting of equally tempered quarter-tones. The various quarter- and third-tone scales described by Arabian and other writers are probably always general scales; they are rarely, if ever, particular or instrumental scales. When quarter-tone intervals occur in any piece of Arabic music, the notes concerned are only grace notes or play an otherwise unimportant part in the melody.

In Indian melody, however, these grace notes are considered to be of very great importance in adding to its expressiveness. Here we find the so-called 'śrutis', intervals varying between one third and one quarter of a tone, which are treated as essential features of the melody. Yet these śrutis never appear to be fixed by the frets of the stringed instruments; they can be produced only by slightly varying the tension or the position of the finger at the place of the frets. Much inquiry is yet needed before the problems of Indian music can be settled. At present we can only regard with considerable suspicion the hitherto generally accepted view that in the Indian general scale the octave, with its seven intervals, is subdivided into twenty-two tones. Recent investigators have suggested that the Indian general scale is identical with our tempered twelve-tone scale of chromatic semitones.

The 'rāgas' play a most important part in Indian music, but in the face of so much disagreement among writers on the subject we can form no clear idea as to what rāgas are. Certain of them are deemed appropriate for certain seasons, some can be played only in the day, others by night. The rāgas are symbolized as individuals, male and female (rāginīs).

A rāga is not to be identified with a scale, inasmuch as there are several different rāgas in the same scale. Nor is it synonymous with the mode, as different rāgas appear in the same mode. Yet every rāga is said to have a definite mode, and to obey the succession of

intervals found in a definite scale. Mixed rāgas also occur, formed from the union of different modes and scales. At present the whole problem of Indian music is involved in obscurity. Its solution requires the co-operation of native and European musicians, so that the traditions and claims of the one may be verified by the accurate and unbiassed observations of the other.

Harmonic intervals in melody.—In the tunes of very primitive people, who always sing in unison and have no knowledge of polyphonic music, we often meet with successive tones which, if sounded together, would produce true consonances. It has been suggested that such consonances have been actually heard by these people, owing perhaps to their chance occurrence in nature or to the occasional want of strict time when members of a chorus are singing together. We may reasonably question whether such accidentally occurring instances of fusion are responsible for the existence of harmonic intervals in the melodies of very primitive folk who never practise polyphonic music. The appreciation of a relation between consecutive tones is a far more plausible explanation, but we are entirely ignorant of the psychological and physiological basis of such appreciation.

So far as the smaller intervals are concerned, we have to bear in mind that approximately whole-tone and semitone intervals (seconds) are exceedingly common among such people, and that in folk music generally the frequency with which the various intervals are used decreases proportionately with their size. It is highly probable that the smaller intervals have been determined rather by the feeling for equal tone-distances than by any feeling for simultaneous harmony. The feeling for tonality may also have helped in the definition of and preference for the smaller intervals in melody.

Tonality.—By the feeling for tonality we mean the underlying recognition of a tonic; that is to say, a certain tone of a melody is regarded as the centre of gravity, to which all the other tones come to have a felt reference and seek for the sake of restfulness to return. The tonic is not necessarily the lowest, nor need it be the final tone of the melody. The feeling for tonality has developed *pari passu* with the growing feeling for harmony; but in a low degree it may certainly exist independently of the latter.

Just as words are grouped into a single sentence and the sentences are grouped into paragraphs, chapters, and so on, so the individual tones of music are grouped into a single section, sections

into a single phrase, &c. The combination of such parts into a unitary whole has been greatly furthered by the feeling for tonality, the felt relation of the individual tones to a tonic. In the most primitive music the feeling for tonality appears to be just dawning, and here we find a corresponding minimum of unification and method. It is as if the attention of primitive folk were incapable of combining more than a few consecutive notes into a connected whole. For a few seconds, perhaps, we catch a glimpse of tonality and tonal relation, and then the tonic, or, as we should say, the key, changes or maybe it is lost in the general chaos of disorder. More definite traces of tonality have been met with in Chinese, Siamese, and Japanese music, among several tribes of the North American Indians, and in India where, it is stated, a special word, *ansa*, exists, denoting the tonic.

Awareness of absolute pitch.—Owing to the growing influence of the feeling for harmony and tonality, we tend to judge of the pitch of a tone in melody not absolutely but by its harmonic relation to the tonic or to some preceding tone. Our attention is diverted more and more completely from the absolute characters of a given tone or tone-combination towards its relation as part of a larger whole. Our musical education leads us to regard the interval as of greater importance than the absolute pitch.

Nevertheless, in certain individuals, especially among the most musically gifted, awareness of absolute pitch is unquestionably present and may become developed among them to an astonishing degree. A single note struck on the piano can be instantly named and identified. If confused at all, the note is apt rather to be confused with its octave than with any neighbouring tone. The answer is given as unreflectingly as if the subject were asked to name a presented colour. Each tone, like each shade of colour, comes to be individually and absolutely recognized. Each immediately revives its special name, *a*, *a*♯, *b*, &c. Some individuals excel best in giving a name to a given tone, others in reproducing the appropriate tone when the name is given.

We are entirely ignorant of the extent to which, and the frequency with which, this awareness of absolute pitch occurs among less civilized and primitive peoples. Individuals in whom it is strongly developed would naturally be averse to transposing a melody or series of tones to another key. When once they had heard a tone or learned a musical phrase, they would repeat it after a prescribed lapse of time

(say, one minute or half an hour) in precisely the same pitch as that in which they had originally heard it. Another method by which a subject's awareness of absolute pitch could be tested (in which memory is not involved) would be to put a native instrument into his hands and to ask him at once to reproduce on it a tone which is sung or played to him by the investigator. The success with which the subject can directly accomplish this without any groping or error would indicate the extent to which his awareness of absolute pitch is developed. The constancy with which from day to day instruments are attuned to the same pitch or songs are sung in the same key would also serve as indications. Among ourselves the transposition of a melody into the corresponding mode of another key is accompanied by a decided change in affective value.

Conditions affecting apparent pitch.—The awareness of absolute pitch has been shown to be closely dependent on the timbre of the tones. Thus a person who succeeds perfectly well on one piano may not succeed on a strange piano or on a different kind of instrument.

The effect of timbre upon pitch is very striking. A sound rich in overtones emitted, for instance, from a reed instrument appears distinctly sharper than one of the same pitch emitted from the flute, which is comparatively free from overtones. A loud sound is also apt to be judged of higher pitch than a soft one. Care must therefore be taken in comparing the pitch of tones produced from different instruments or with different intensities. For like reason it is of interest to discover whether a native language has separate words for denoting pitch, intensity, and timbre.

We have always to be on our guard against purely accidental deviations from strict intonation. We may detect them by procuring repeated phonographic versions of the melody at different times from the same or different individuals. Deviations from exact intonation are to be expected among primitive folk who are careless and unmethodical in their artistic production generally. Such errors naturally tend to be overlooked by the people in the absence of any controlling feeling for harmony. Such errors are encouraged by difficulties of technique, by temporary excitement, and by the various feelings associated with the various tone-intervals. We ourselves, for example, tend to exaggerate the difference between major and minor thirds, making the former too large, and the latter too small.

Our attitude towards strange music.—It is easy to see how a regard for regular rhythm, harmony and tonality, and the principle of

equal temperament are responsible for the attitude of European civilization towards music generally. No sooner do we hear a piece of primitive or advanced music than we endeavour to interpret it in terms with which custom has long familiarized us. Absolutely without reflection we read into the music regular accents, we arrange it in bars, we declare it to be in such and such a key, and to be in the major or in the minor scale, we identify its intervals with those of our own to which they most nearly correspond. We forget that the complexities of rhythm may far exceed what we are accustomed to, and that primitive music knows little of tonality, and nothing of major or minor scale.

Thus it comes about that many examples of primitive music are incomprehensible to us, just because they are not so readily assimilated as those which are more nearly related to our previous experiences. Our attention is continuously distracted, now by the strange features and changes of rhythm, now by the extraordinary colouring of strange instruments, now by the unwonted progression and character of intervals. Consequently much familiarity is needed before we can regard such music from a standpoint that will allow of faithful description. We have first to disregard our well-trained feelings towards consonances and dissonances. We have next to banish to the margins of our field of consciousness certain aspects of music, which, were it our own music, would occupy the very focus of attention. Thus incomprehensibility will gradually give place to meaning, and dislike to some interesting emotion.

Appendix

The manipulation of the phonograph.—The principle of Edison's phonograph is familiar to most people. A wax cylinder rotating about its horizontal axis is driven by clockwork (or by other mechanism). A recording diaphragm, the 'recorder', is brought to bear on the revolving cylinder. The recorder consists essentially of a very thin glass disk, to the lower surface of which is cemented a sapphire pointer or style. This sharp style cuts a shallow groove on the wax cylinder. While the cylinder is revolving, the recorder is so moved that it marks a continuous spiral groove from end to end of the surface of the cylinder.

To obtain a phonographic record or 'phonogram', a blank cylinder is placed on the phonograph, a trumpet is affixed to the

recorder, the clockwork is started, the style of the recorder is lowered on to the surface of the cylinder, and the desired sounds are made to enter the trumpet. To reproduce the record, all that is done is to substitute the 'reproducer' for the recorder. The former, like the latter, consists of a thin disk of glass, but to it is affixed a blunt sapphire style which, when brought to bear on a phonogram, follows the spiral groove and accurately reproduces the movements previously made by the sharp style of the recorder. These movements are communicated to the glass diaphragm of the reproducer and transmitted to the external air as vibrations of sound, where they are reinforced by means of the trumpet attached to the reproducer.

A complete outfit for taking and reproducing phonograms consists of (1) phonograph (and accessories); (2) wax cylinders; (3) recorder and reproducer; (4) spare parts in duplicate.

1. The phonograph which I recommend to travellers is called the Edison-Bell Standard Phonograph. It is enclosed in a well-made box, and weighs 19 lb. It can thus be carried without difficulty. I have heard surprisingly good records taken in the field with lighter and cheaper phonographs, but I consider it dangerous to depend on them, as the clockwork of such instruments is liable to run irregularly, and in other ways to wear badly.

The accessories comprise trumpet, oil-can, oil, and brush.

The same trumpet can quite well be used for recording and for reproducing phonograms. In my experience the best form measures about six inches in diameter at the mouth, and is about fourteen inches long.

The makers of the instrument supply the most suitable oil, and give the purchaser directions for occasionally oiling certain parts of the mechanism. A broad camel's-hair brush should be used for dusting the cylinder after its surface has been traversed by the sharp style of the recorder.

2. The wax cylinders are supplied each in a separate cardboard box, which is lined with cotton-wool. Spoiled cylinders cannot easily be used for taking new records. It is true that most phonographs are fitted with a sharp cutting edge for the purpose of shaving the surface of useless records, but so much practice is necessary before a clean even surface can be obtained that the shaving mechanism should, as far as possible, be avoided. The cylinders are extremely fragile, but the manufacturers pack them so that the loss due to breakage is negligibly small. In dry climates the

cylinders keep well, but in the damp a mould forms in and on them, which seriously impairs the success of the record. I have found that the cylinders keep well in the damp heat of the tropics, if each is wrapped in oiled paper and is enclosed in a tin case. Fresh supplies of cylinders, if wanted, can easily be sent out safely packed.

3. Recorders and reproducers vary both in type and in efficiency. The purchaser should explain to the makers the kind of music which he wishes to record, and should test the recorder before employing it in the field.

4. It is important that the cylinder should revolve at the same rate during reproduction as during the taking of the record; for the speed with which a phonographic record rotates determines not only the tempo but the pitch of the sounds which it reproduces. When a note of given pitch is sounded before the trumpet at the time of taking the record, and when a note of precisely the same pitch is later reproduced by that record, we can be assured that the cylinder is rotating at the same speed during reproduction as it was during the taking of the record. Accordingly, a pitch-pipe, such as is sold at the music shops, should form part of the phonographic equipment. This, when blown, emits a tone of definite pitch, e.g. $a' = 435$ vibrations per second. Just before any desired record is taken, this pitch-pipe is sounded before the trumpet. Of course the clockwork must not be stopped or its speed altered after the pitch-pipe has sounded.

5. A spare recorder and reproducer should be taken, as well as spare glass diaphragms and cement, in case of breakage. It is easy to replace the broken glass disk of a reproducer or recorder and to cement the style to it. A spare trumpet, oil-can, brushes, and pitch-pipes should be taken in case of possible loss. It is also advisable to take certain screws and leather parts of the phonograph in duplicate. A screwdriver should be included in the outfit.

Before a phonographic record is taken in the field, it is advisable to hold a rehearsal of the performance, especially if the singers or performers are inexperienced. Individual voices will be found to differ considerably in the successfulness of the records which they yield. A powerful voice will often yield a most unpleasantly sounding phonogram. This is particularly apt to occur if the singer be not placed so as to sing directly into the centre of the trumpet. If he be sitting sideways near the instrument, so that his voice falls obliquely on to the trumpet, a very jarring and unfaithful record will

result. If a group of singers or an orchestra of instruments be making the record, they should be grouped in a semicircle before the phonograph, the most important soloists being placed nearest to the mouth of the trumpet. When the piece is made up of several simultaneous parts, each with a more or less independent tune or rhythm, it may be advisable for the investigator to take more than one record, placing now one singer or player (e.g. drummer), now another in the foreground of the phonograph.

The speed with which the cylinder rotates varies with the extent to which the clockwork is wound up, and can be regulated by means of an adjustable head attached to the instrument. Before a record is taken the clockwork should always be fully wound up. The rate of rotation of the cylinder should roughly be two revolutions per second. It can easily be gauged by lightly placing the finger upon the small wheel over which the leather band passes. The rate should be faster for music in which the tones are prolonged than for music of a more lively and less monotonous kind, but the speed just mentioned will be found generally serviceable.

The title of the song should be sung into the phonograph before the record is taken. This is to be followed by the sounding of the pitch-pipe, which should serve as a signal for the musicians to begin. A number should be allotted to each record taken. The title and the number of the record should be written on the outside of the tin or cardboard case of the record, and should correspond with the number in a note-book, in which are written the names, tribes, &c., of the executants, the instruments used, the significance, words, &c., of the music.

The phonograph should be similarly used to record the sounds of instruments which cannot be relied on to keep their pitch when they are sent to Europe. All stringed and reed instruments come under this head, and such percussion instruments (e.g. gongs) as are attuned by the attachment of pieces of wax. Even when the necks of the stringed instruments are provided with frets, the performers frequently vary the intonation by slightly changing the position of their fingers. Similar variations are sometimes produced in the case of wind instruments by only partially uncovering the holes.

Records when once taken should be reproduced as seldom as possible. It is advisable that they be returned home so that the records may be mechanically copied on to other cylinders without needless delay. Or permanent moulds may be prepared from the originals, and duplicate cylinders can be made from the moulds.

When properly cared for, the wax records last for a very considerable time without showing serious signs of deterioration.

The transcription of phonograms.—For the purposes of transcribing the phonographic records, two instruments are necessary. The first is a metronome for determining the tempo of the music and its variations. The second is some form of apparatus which will produce tones of any desired pitch within a given range. Either an Appun's 'Tonmesser' or a Stern's 'Tonvariator' can be employed for this purpose. The former consists of a box of metal tongues, any one of which can be made to vibrate at will by means of air driven from bellows. The tongues need to be carefully tuned so as to give tones successively differing by one or two vibrations. The latter is a vertical cylindrical vessel provided with a narrow upper neck, over the top of which a blast of air is driven, throwing the air contained within the vessel into vibration. The pitch of the tone thus emitted can be varied by diminishing or increasing the height of the cylinder. The base of the cylinder consists of a movable plate, the position of which can be delicately adjusted by a rod and screw action attached.

The phonographic records should at first be roughly transcribed in what appears to the observer to be the most nearly corresponding notation. Then the pitch of the most important and prolonged tones of the tune is carefully determined by comparison with the tones of known pitch produced by the Tonmesser or Tonvariator. Any given tone can be prolonged on the phonograph by holding up the lever which plays upon the spiral steel thread. By this means the reproducer, instead of travelling along the spiral groove cut in the wax cylinder, remains stationary, continuing in the same groove and reproducing an unchanged note while the cylinder is rotating. But such procedure, if unduly prolonged, converts the spiral groove of the record into a circular groove, and so causes serious damage to the record.

Graphic records.—Graphic records of a tune may be produced in the field by an arrangement which allows the vibrations of the recording style to be written on a travelling sheet of smoked paper. Such smoked surfaces also afford valuable means of recording complex rhythms. In place of the drum, stick, or rattle, a Morse key is provided, and the taps made by the performer on this key are electrically communicated to a 'time-signal' which is brought to bear on the smoked surface. Below these markings another time-signal, electrically connected with a silent clock, marks fifths of seconds.

THE SIGYNNAE OF HERODOTUS AN ETHNOLOGICAL PROBLEM OF THE EARLY IRON AGE

By J. L. MYRES

The time has now gone by when it was safe to jeer at Herodotus as a mere retailer of travellers' stories. For us the Father of History is no less the Father of Anthropology. That he is become so, for some of us, is the outcome of a request made in all diffidence by certain Oxford undergraduates, in the Easter Term of 1892, that the Reader in Anthropology would lecture, if only for once, on the earlier books of Herodotus, or at least on such passages of them as demanded anthropological commentary. No one, I think, of the audience of those lectures on 'Anthropology as related to Ancient and Modern History', has forgotten the wealth of learning, and the truly planetary outlook with which that experiment was made. It was obvious—as we had indeed suspected, but in far greater degree—that there was a great mass of new material already available for the interpretation of the ancient Mediterranean world, and of a Greek's outlook over it, which would well repay research; and one at least of that audience has never regretted the devotion of his life to that task.

The passage of Herodotus, which forms the subject of this paper, must be studied in its context.[1] Herodotus has been describing Thrace, of which the northern boundary is, for him, the river Ister. '*Further north of this country no one can say for certain*

[1] Hdt. v. 9 Τὸ δὲ πρὸς *βορέω* τῆς χώρης ἔτι ταύτης οὐδεὶς ἔχει φράσαι τὸ ἀτρεκὲς οἵτινες εἰσὶ ἄνθρωποι οἰκέοντες αὐτήν, ἀλλὰ τὰ πέρην ἤδη τοῦ Ἴστρου ἔρημος χώρη φαίνεται ἐοῦσα καὶ ἄπειρος. μούνους δὲ δύναμαι πυθέσθαι οἰκέοντας πέρην τοῦ Ἴστρου ἀνθρώπους τοῖσι οὔνομα εἶναι Σιγύννας, ἐσθῆτι δὲ χρεωμένους Μηδικῇ· τοὺς δὲ ἵππους αὐτῶν εἶναι λασίους ἅπαν τὸ σῶμα ἐπὶ πέντε δακτύλους τὸ βάθος τῶν τριχῶν, μικροὺς δὲ καὶ σιμοὺς καὶ ἀδυνάτους ἄνδρας φέρειν, ζευγνυμένους δὲ ὑπ' ἅρματα εἶναι ὀξυτάτους· ἁρματηλατέειν δὲ πρὸς ταῦτα τοὺς ἐπιχωρίους. κατήκειν δὲ τούτων τοὺς οὔρους ἀγχοῦ Ἐνετῶν τῶν ἐν τῷ Ἀδρίῃ. εἶναι δὲ Μήδων σφέας ἀποίκους λέγουσι. ὅκως δὲ οὗτοι Μήδων ἄποικοι γεγόνασι, ἐγὼ μὲν οὐκ ἔχω ἐπιφράσασθαι, γένοιτο δ' ἂν πᾶν ἐν τῷ μακρῷ χρόνῳ. σιγύννας δ' ὦν καλέουσι Λίγυες οἱ ἄνω ὑπὲρ Μασσαλίης οἰκέοντες τοὺς καπήλους, Κύπριοι δὲ τὰ δόρατα.

who the human inhabitants are, but the parts beyond the Ister seem to be desert country and limitless. The only human beings that I can discover living beyond the Ister are those whose name is Sigynnae. They wear Median costume. Their horses are shaggy all over, to five fingers' depth of hair: they are small and snub-nosed, and not strong enough to carry a man; but when they are harnessed to carts they are very fast; and that is why the natives go about in carts. This people's frontiers reach nearly to the 'Eneti on the Adriatic. They say, however, that they are a colony of Medes. How they have come to be a colony of Medes I cannot explain: yet anything might happen, if you gave it time enough. I will only add that the Ligurians living up country above Marseilles call the pedlars "sigynnae", and the Cyprians their spears.

Here we have seven points which we must treat separately in detail:—(1) The Sigynnae live beyond the Danube and north of Thrace; (2) From the Lower Danube they extend westward as far as the region of the 'Eneti on the Adriatic; (3) they wear 'Median dress'; (4) they believe themselves to be a colony of Medes; (5) they drive small, shaggy, snub-nosed ponies, very fast, but too small for riding; (6) their name is applied to 'pedlars' by the Ligurians inland of Marseilles, and (7) by the people of Cyprus to some peculiar make of spear. Does all this information really belong together; or is Herodotus merely garrulous and incoherent?

(1) *The Sigynnae live beyond the Danube and north of Thrace.* This would seem to indicate the modern Wallachia or southern Roumania. No other writer of pre-Alexandrine date mentions the Sigynnae at all. But Apollonius of Rhodes,[1] whose geographical knowledge is extensive, gives Σίγυννοι (*Sigynni*) as a people who in early times lived near the island of Peuke—one of the numerous eyots in the Roumanian section of the Danube. With them Apollonius associates Θρήιξιν μιγάδες Σκύθαι; he regards them therefore as lying on the debatable land between the 'Thracians' of the Balkan highlands and the 'Scythians' of the Roumanian and South Russian steppes.

Strabo, the only other ancient writer who seems to mention them, does not record them in this region at all, but describes *Siginni* in some detail in a list of the peoples of Caucasus. Nothing would be

[1] Apoll. Rhod. *Argonautica*, iv. 320. I venture to assume that, for our present purpose, the variation between Σίγυνναι (Hdt.), Σίγυννοι (Ap. Rh.), and Σίγυννοι (Strabo) is negligible.

more unsafe than to base any inference on the mere recurrence of a tribal name; but Strabo is a learned and careful writer, and his description of the Caucasian Siginni corresponds so closely with the Herodotean account of their Danubian namesakes, that despite the great interval of space and time, we seem to have something more than a coincidence of sound. '*In other respects the Siginni live like Persians; but*'—unlike the Persians—'*they use ponies, small and shaggy, which are not strong enough to carry a rider; and so they drive them in harness, four-in-hand.*'[1]

Even this of course might be interpreted as a blundered plagiarism from Herodotus, introduced to 'add verisimilitude' to the bald and unconvincing fact of the duplicated name. But this explanation is precluded by the circumstance that these Caucasian Siginni live adjacent to a group of peoples whom Strabo describes as taking exactly the same pessimistic view of life as the Thracian *Trausi* of Herodotus: yet in this instance the synonym-motive is absent; and under these circumstances it is not easy to see why Strabo should be suspected of having copied in the one instance any more than in the other, especially as in neither case does he seem to be aware of the parallel.[2]

(2) *From the Lower Danube the Sigynnae extend westward as far as the region of the 'Eneti on the Adriatic.* We have seen already that for Herodotus the proper home of the Sigynnae is in Wallachia; but he describes the country beyond the Danube as 'limitless'—that is, devoid of natural barriers—and regards the Sigynnae as extending, with their pony-carts, nearly to the head of the Adriatic: for the

[1] Strabo, 520 Σίγιννοι δὲ τἆλλα μὲν περσίζουσιν, ἱππαρίοις δὲ χρῶνται μικροῖς δασέσιν ἅπερ ἱππότην ὀχεῖν μὲν οὐ δύναται, τεθρίππῳ δὲ ζευγνύουσιν.

[2] Herodotus, v. 4 Τραυσοὶ δὲ τὰ μὲν ἄλλα κατὰ ταὐτὰ τοῖσι ἄλλοισι Θρήιξι ἐπιτελέουσι, κατὰ δὲ τὸν γινόμενόν σφι καὶ ἀπογινόμενον ποιεῦσι τοιάδε· τὸν μὲν γενόμενον περιζόμενοι οἱ προσήκοντες ὀλοφύρονται, ὅσα μιν δεῖ ἐπείτε ἐγένετο ἀναπλῆσαι κακά, ἀνηγεόμενοι τὰ ἀνθρωπήια πάντα πάθεα· τὸν δ' ἀπογενόμενον παίζοντές τε καὶ ἡδόμενοι γῇ κρύπτουσι, ἐπιλέγοντες ὅσων κακῶν ἐξαπαλλαχθεὶς ἐστὶ ἐν πάσῃ εὐδαιμονίῃ. Compare what he says of the Getae, who lie, like the Sigynnae, across the Danube opposite to Thrace, and 'profess to live for ever' (Hdt. iv. 95).

Strabo's contribution is, that he applies to certain 'quite barbarous' peoples of 'Caucasus and the rest of the highland country' the well-known lines of Euripides (*Kresphontes*, fr. 452 Nauck):—

> τὸν φύντα θρηνεῖν εἰς ὅσ' ἔρχεται κακά,
> τὸν δ' αὖ θανόντα καὶ πόνων πεπαυμένον
> χαίροντας εὐφημοῦντας ἐκπέμπειν δόμων.

word κατήκειν in Herodotus has regularly the sense of 'extending *seawards*'. It is safe therefore to infer that in spite of his allusion elsewhere to 'the *rivers* Alpis and Karpis' as tributaries of the Danube,[1] he had no clear knowledge of the existence of the Karpathians or of the Julian Alps, and regarded the steppes of South Russia and Roumania as continuous with the Hungarian plain, and probably this plain also as continuous with the flat land round Venice. And so far as the actual distribution of nomad or semi-nomad peoples is concerned, he was indeed more nearly right than he knew; for neither the Karpathians nor the Julian Alps have ever interposed a serious obstacle in face of such peoples.

There was excellent reason why Herodotus should apply the qualification '*on the Adriatic*' to the name of the 'Eneti; for it was necessary, even in his time, to distinguish these Adriatic 'Eneti, or as later geographers call them, *Veneti*, in the flat land between the Timavo and the Adige, from those 'Eneti whom Homer describes as settled in Paphlagonia in North-West Asia Minor;[2] an extreme instance of a large class of duplicated tribe names to east and to west of the head of the Aegean Sea. Later geographers, after Caesar's time,[3] had also to take into account the seafaring Veneti of Brittany, but of these, as we should expect, Herodotus has no knowledge.

Among these later geographers there was general agreement that these scattered bodies of Veneti had some original unity; and in Strabo's time theories were current. Either the Adriatic VEneti were a Cisalpine offshoot of the Breton Veneti,[4] or they were colonists (under the Trojan Antenor) of their Paphlagonian namesakes,[5] and a branch of that great Trojan or Phrygian exodus, the best known legends of which underlie Virgil's story of Aeneas. But all agreed that these Adriatic VEneti were intrusive in Italy; and this gives point to the phrase of Herodotus that the Sigynnae likewise 'extend seawards' on their track, 'as far as the VEneti on the Adriatic.' For it almost looks as if he had in his mind the third possible view of the relationship of these two groups of Veneti; namely that both represent fragments of an earlier continuous Venetia, which had

[1] Hdt. iv. 49.
[2] Homer, *Iliad* ii. 852.
[3] Caesar, *B. G.* ii. 34.
[4] Strabo, 195, 215; Ptolemy, ii. 8. 6; Dio Cassius, 39, 40.
[5] Strabo, 61, 195, 212, 543, 608; Livy, i. 1.

been shattered and pushed right and left by the advent of the Danubian Sigynnae.

I think it will be clear from what precedes, that any attempt to explain the *Sigynnae* of Herodotus must take account of a geographical distribution which extends, north of the Danube, from a point near the head of the Adriatic to the neighbourhood of the Danube mouth; and includes also a district in Caucasus where there survived not merely the name *Siginni* but also customs and beliefs which prevailed, earlier, along the Danube. The Paphlagonian VEneti, in their Thraco-Phrygian context, supply probably a clue as to the way by which Strabo's *Siginni* reached their Caucasian home.

(3) *The Sigynnae wear Median dress.* This costume, which for Greek writers means the costume of a Persian in the sixth and fifth centuries B.C., is described by Herodotus in some detail.[1] Its principal characteristics are the κυρβασίη or τιάρα, a soft conical cap; the καννάκης, a sleeved jacket or coat, described also by Herodotus as a κιθὼν (χιτὼν) χειριδωτός; and the ἀναξυρίδες, or trousers. It is the latter garment which, being most foreign to Greek custom, caused the greatest remark, and may be taken to be mainly intended here. For the same word ἀναξυρίδες—perhaps Persian, and certainly not Greek[2]—is used regularly in later Greek to describe any kind of trousers, whether worn by Orientals or not. Polybius, for example,[3] uses it three centuries later than Herodotus to describe the nether garments of the Insubrian Gauls of the neighbourhood of Milan, which Latin writers—equally unprovided with a word of their own for such clothing—denote by their Gaulish name of *braccae* or 'breeches'. These *braccae* were recognized, in due course, as being characteristic of Gauls in general; and we find *Gallia Braccata* used, as the popular correlative of *Gallia Togata*, to denote those parts of Gaul which had not yet adopted Roman civil costume.

Strabo's Caucasian Siginni are not expressly equipped with ἀναξυρίδες or *braccae*; but when he says[4] that except for their pony-carts 'they imitate the Persians', it is natural to suppose that this conspicuously 'Persian' trait was not wanting. That they 'imitated the Persians' it would be superfluous to mention, if this did not distinguish these Siginni from some at least of their Caucasian neighbours. We are left, therefore, with the probability that these Cau-

[1] Hdt. i. 71, 135; iii. 84; v. 49; vii. 61. Compare Xenophon, *Anabasis*, i. 2. 27.

[2] See Baehr's note on Hdt. i. 71.

[3] Polybius, ii. 136. 7.

[4] Strabo, 520 τἆλλα μὲν περσίζουσι.

casian Siginni formed a more or less isolated patch of people who resembled Persians in some respects in which the Danubian Sigynnae also resembled them; but at the same time resembled the Danubian Sigynnae also in another aspect—namely their pony-carts,—in which a Persian parallel was wanting. As between Persian and Danubian affinities for the 'Persian' attributes of the Caucasian Siginni, the balance of probability is on the whole in favour of the Danubian connexion.

(4) *The Sigynnae believe themselves to be a colony of Medes.* This is, of course, very far from an assertion that they really were so; it is difficult to see under what circumstances such a colonization could have taken place; and Strabo's account of Siginni in Caucasus suggests that any movement which has occurred has been in the other direction, from South-Eastern Europe into Asia Minor. There was, moreover, later at all events, a notable people called the *Maedi* (Μαιδοί[1]) in Western Thrace, who may have been kinsmen of the Sigynnae, and may well have been confused, in local speech, with the *Medi* (Μηδοί) whose name would suggest itself at once to Greek observers, to account for the Sigynnian trousers.

Herodotus is inclined to admit a Median origin, only if time will allow it. But this is precisely what time will not allow. The Medes themselves only appear in Media—if we may judge from Assyrian records of them—a little before 700 B.C.; and there is no reason for believing that the Median Empire ever extended further west than the Halys, which became its frontier, after a six years' war with Lydia, under the treaty of 585 B.C. There is on the other hand some reason, I think, for believing that one element in the turmoil of nationalities, which is the background of the last century of Assyria, was an eastward stream of migration through Asia Minor into Armenia and probably even further to the south-eastward; and that this eastward movement *out* of Asia Minor is itself to be identified as the sequel of an eastward movement *into* Asia Minor by way of the Hellespont, of which one of the latest incidents is the

[1] The Maedi are first recorded by Thucydides (ii. 98) at the end of the fifth century B. C. He places them west of Paeonia (the upper valley of the Axius) and near the Sinti of the middle Strymon. Later writers find them also further north round the headwaters of the Axius and the Margus. Polyb. x. 41. 4; Diod. Sic. xxx. 19; Liv. xxv. 25, xxvi. 25, xl. 22; Plin. iv. 40; Ptol. iii. 11. 8; Eutrop. v. 7; Justin, 15. 2, and Diodorus, *loc. cit.*, actually write *Medi* and Μηδική.

Kimmerian invasion of the seventh century, and one of the earlier was the Thraco-Phrygian movements of approximately Homeric time,[1] of which we have already to take note in dealing with the Paphlagonian VEneti.

(5) *The Sigynnae drive small, shaggy, snub-nosed ponies, very fast, but too small for riding.* It is a graphic description of the typical breed of northern Europe. With the snub-nose compare the 'great and hooked head' of the Hungarian horse of the fourth century A. D.,[2] coupled as it is with low stature, copious mane and tail, and great speed. There was also as late as Roman Imperial times a notable breed of horses of great speed and endurance among the Adriatic Veneti.[3] Similar dwarf horses (*ginni*) were a regular article of export among the Ligurians of Savoy,[4] and on the testimony of Aristotle[5] the breed can be traced in this region as far back as the fourth century.

At this point it is remarkable that, as we have seen, Strabo's Caucasian Siginni likewise 'use little shaggy ponies which are unable to carry a rider; so they harness them four-in-hand'.

(6) *The name Sigynnae is applied to pedlars by the Ligurians 'inland of Marseilles'*, i.e. up the Rhone and its eastern tributaries Isère and Druence. Now immediately beyond this 'Ligurian' country comes that of the Gallic Allobroges, and beyond these and the Rhone lie the Jura and the country of the Sequani; and there is clearly sufficient superficial similarity between the names *Sequani* and Σίγυνναι to justify further inquiry.

On the purely philological side we should note that the word σίγυννος when used for a javelin, as Herodotus describes, though common in later Greek,[6] remains very variable in its spelling,[7] and

[1] Homer, *Iliad* ii. 845; iii. 184 ff. See also a paper entitled *A History of the Pelasgian Theory* in the forthcoming volume of the *Journal of Hellenic Studies*.

[2] Vegetius, *Ars Vet.* iv. 6. 5, quoted in full by Ridgeway, *Origin and Influence of the Thoroughbred Horse*, pp. 318–19. Compare also the 'ugly shaped skull' of horse skeletons from Mâcon, quoted by Ridgeway, *loc. cit.*, p. 94. On the Sigynnae see also Ridgeway, *loc. cit.*, p. 345.

[3] Strabo, 215. [4] Strabo, 202; Ridgeway, *loc. cit.*, p. 321.

[5] Aristotle, *Hist. Animalium*, vi. 24. 1; *de Gen. An.* ii. 8. 24.

[6] For its use in the Cypriote dialect and for the kind of spear which it denoted, see below p. 271.

[7] The regular variants are σίγυννος (σίγυννα, σίγυννον), σίγυμνον, σιγύνη (σιγύνης), σιβύνη, ζιβύνη. See Stein's note on Hdt. v. 9. It is perhaps worth noting that

this in turn suggests (*a*) that it was recognized as a foreign word, not easy to pronounce, and (*b*) that the difficulty arose from the fact that the γ represented, not a pure *G* sound, but something between this and a labial (represented by γμ or even β); in fact, what we denote by a *Q*.

On the archaeological side, the κάπηλοι of the Ligurians, whether *Sequani* or not, must have had something of value to export, either from their own country or from beyond it. Now the Sequani do not lie directly on any of the great northern routes from Marseilles, but rather in a less passable highland region between these routes. But they do lie in a region which produced in classical times at any rate one valuable commodity, the *iron* of the Jura forges so fully explored by M. Quiquerez.[1] Now these forges of the Jura lie in so intimate a connexion both of place and date with the copious iron-using culture of La Tène and similar sites in Western Switzerland, and these in their turn with an important group of early Carinthian and Styrian iron-workings,[2] and even with a site as far east as that at Gyalar in Transylvania,[3] that we are tempted to pursue this hint and see whither it will lead us. Was there, in fact, any reason for describing any particular kind of iron javelin by the name of the Sequani or their country?[4]

La Tène, the Sequani, and the type of the 'Gaesum'. The La Tène phase of iron-using culture does not itself go back to the beginning of the Iron Age in Europe. It is a late and rather local development

in a fragment of the late comedian Baton (Athenaeus, xiv. 662 c) occurs a woman named Σιβύνη, apparently a cook, and probably a slave. Was she perhaps by birth a *Sigynna*, or even a *Sequana*?

[1] Quiquerez, 'Notice sur les forges primitives dans le Jura,' in *Mitth. d. antiq. Gesellschaft von Zürich*, 1871.

[2] Gowland, *Journ. Iron and Steel Institute* (London, 1897), lii. 205. On the whole subject see also Beck, *Geschichte des Eisens* (Braunschweig, 1892), and Gowland, 'The Early Metallurgy of Copper, Tin, and Iron in Europe,' in *Archaeologia*, lvi (1899), pp. 315–21.

[3] Münichsdörfer, *Der Hüttenberger Erzberg*; Wankel, *Prähistorische Eisenschmelz- und Schmiedestätten* (Wien), 1879.

[4] It was only while correcting the proof of this essay that I became acquainted with the article of M. C. Jullian (*Revue des Études Anciennes*, viii (1906), pp. 111 ff.), in which he discusses the ethnology of the Trans-Alpine iron-culture, and attributes the culture of Hallstatt to the Sigynnae. On the Sigynnae as Danubian traders—'seraient-ils les premiers importateurs du bronze en Occident?'—see Bertrand and Reinach. *La Gaule avant les Gaulois.* Paris, 1891, pp. 259–60.

of that earlier style which takes its name from the necropolis of Hallstatt. Continuity of development is more marked in some departments than in others, and is particularly clear in the case of a large series of spear-heads, which show continuous development from simple Late Bronze Age prototypes into two main groups of forms.

The Bronze Age prototypes show a double-edged blade reinforced along its median line by a kind of mid-rib, to resist lateral stresses. At the base of the blade the mid-rib is prolonged into a tubular socket, into which the pointed end of the spear-shaft is thrust, and then made secure by one or more nails driven transversely through holes in the wall of the socket. Sometimes the blade with its mid-rib has a concave section like that of a hollow-ground razor; sometimes the mid-rib is treated apart from the lateral wings as a prolongation of the tubular socket, and has a convex section for a considerable part of its length; occasionally it is even hollow for some distance beyond the base of the wings.

Even in the Bronze Age the proportions of socket, mid-rib, and wings vary greatly; the extremes of the series being furnished (*a*) by a long and very narrow blade, with mid-rib enlarged and wings reduced, and (*b*) by a short broad blade, with leaf-shaped outline, and wings greatly expanded. And these opposite tendencies are still active at the beginning of the Age of Iron.

The short broad series leads of course to an almost infinite variety of forms. It is well represented at Hallstatt, and in most other sites of that phase; and at La Tène it leads to a remarkable school, in which the wings become unsymmetrical and are worked into flamboyant and fantastic outlines or thinned away into large apertures internally. This series, however, remains rather local in Western Switzerland; and it betrays an ability to cater for individual tastes, which could hardly have existed except in close proximity to the place of production; in this case, to the iron workings of the Jura.

The other series begins, at Hallstatt, with a weapon of which a good example is figured by von Sacken.[1] The blade is about 18 inches long, and nowhere more than 1½ inches wide; and the cutting edges are parallel for nearly the whole of their length. The wings are thus very shallow in themselves; and their shallowness is accentuated by the extreme prominence of the mid-rib,

[1] von Sacken, *Gräberfeld von Hallstatt* (Wien, 1868), Pl. VII. 2.

which is narrow and deep, and tapers to its crest almost as sharply as do the wings. The cross-section of the blade is in fact almost cruciform, and the general effect is that of a four-winged blade.[1] In compactness, penetration, and facility of withdrawal from the wound, this type compares not unfavourably with the French duelling-sword, and with the long bayonets of the nineteenth century. As it has reduced its external excrescences to a minimum, it can be readily packed in large bundles, or held in a cluster in the hand, without inconvenience or waste of space: it is therefore eminently portable, and adapted to serve as missile ammunition; while its form recommends it equally for throwing or for spear-play. It is not surprising therefore to find that this weapon has a wide distribution over the Hallstatt region;[2] that it recurs over a considerable range of time, in Switzerland;[3] that, where it occurs in tombs, it is frequently found two or more together, after the manner of a throwing-spear;[4] and that this equipment of light throwing-spears was recognized by the men south of the Alps as characteristic of intruders from the mountains themselves or from beyond.[5]

As the absolute chronology of the Hallstatt culture is still matter of dispute, and as it strengthens our argument considerably if this long narrow-bladed type can be shown to have been permanently established in this trans-Alpine area, it is well to note here that another practically wingless spear was evolved also in the La Tène culture, in which one of the best defined varieties of spear-head has its long tubular socket (or rather the neck which joins it with the midrib and wings) enormously developed at the expense of the rest of the head; so that the wings extend at most over half of its total length, and occasionally over less than one quarter. In this type, however, although the wings are so short,

[1] Curiously enough, this type was anticipated in Cyprus quite early in the Bronze Age (Ohnefalsch-Richter, *Kypros, the Bible and Homer* (London, 1893), Pl. cli. 27); but like so many things in early Cyprus, it does not seem to have persisted.

[2] von Sacken, *loc. cit.*, p. 36.

[3] Troyon, *Habitations Lacustres*, Pl. xv. 1, 2, 5, 6, 15, 17; Desor, *Pfahlbauten des Neuenburger Sees*, p. 98.

[4] Instances in von Sacken, *loc. cit.*, p. 36.

[5] Caesar only uses the word *gaesum* once, in recounting a fight in Valais against strictly Alpine folk, *B. G.* iii. 4. 1. Compare Virgil's phrase, *Duo quisque Alpina coruscant gaesa manu.—Aeneid* viii. 661.

and proportionately narrow, they are still regular wings, with a lanceolate outline, and the well-marked concave surfaces which are so characteristic of the spears of La Tène. The wingless neck, too, in this series remains cylindrical, and never becomes cruciform or foursquare.[1]

Not only was a light throwing-spear of these or similar fabrics recognized in Italy as characteristic of trans-Alpine warfare: even the name of this trans-Alpine weapon, *gaesum*, γαῖσον, passed early into Latin, and thence into the Greek of Polybius; and it is not improbable that the Gaesatae, a great free-company from the trans-Alpine country and in particular from the valley of the Rhone,[2] who caused dire terror in Northern Italy in the tumultuary years between 226 and 222 B.C., owed their own name likewise to their characteristic weapon.[3]

The identification of the *gaesum* with this particular type of spear is due to Hesychius, who explains it as ἐμβόλιον ὁλοσίδηρον, 'a spit-like weapon, wholly of iron.' The Hallstatt spears are of course not 'wholly of iron' in the strictest sense, for they are socketed to receive a wooden shaft.[4] But a spear with so long and narrow a head is obviously in far less need of a long shaft to steady its flight; or rather, any shaft long enough to do so would be too

[1] For examples see Gross, *La Tène* (Paris, 1887), Pl. V. 3. 7 (one-half length); v. 1. 11 (one-quarter); reproduced in Munro, *Lake Dwellings of Europe* (London, 1890), fig. 88 (19, 20, 21).

[2] Adjacent, that is, to the iron-working Jura and the later home of the Sequani.

[3] Polybius, it is true, says (ii. 22. 1) that *Gaesatae* meant 'people paid to fight', i.e. specifically mercenaries; but nothing is so common as the designation of such troops by their equipment, particularly as this so frequently stands in contrast with that of the people whom they happen to be serving. Orosius (4. 13), on the other hand, calls them *gaesati*, and clearly regarded the name merely as an adjective formed from *gaesum*. The word *gaesum*, formerly connected by Schrader with Gothic *gazas*, 'spike' (Schrader-Jevons, *Prehistoric Antiquities of the Aryan Peoples*, London, 1890, p. 218) is now derived by him from a practically identical Gallic word, which reappears in the Irish *gae*, 'spear,' and has probably been borrowed by Teutonic speech (OHG. *ger*, AS. *gár*, &c.). *Reallexicon der Indo-Germanischen Altertumskunde*, Strassburg, 1901, p. 787.

[4] Actual examples of spears 'wholly of iron'—shaft and blade in one piece—occur sporadically all through the iron-working culture of Equatorial Africa which presents so many similarities of technique with that of Early Europe; there are specimens in the Pitt-Rivers Museum and in the Leicester Museum. I do not, however, know of any European instance.

long to be portable or convenient either for throwing or for thrusting.

The 'sigynna', the 'gaesum', and the Roman 'pilum'. This last point will become clearer when we trace the distribution of the narrow-bladed type on the margins of the Hallstatt region.

The crucial instance is in Spain. Athenaeus (vi. 273) states that the *gaesum*, which in Polybius's time was still a regular throwing-spear of the Roman legionary, was borrowed by the Romans from the Iberians of Spain. *Fas est et ab hoste doceri.* It was not the first time that the Romans had remodelled their mode of warfare in imitation of the practice of an enemy whom they respected.

Moreover the *pilum* itself, the regulation throwing-spear of the Roman legionary, is nothing but an extreme case of specialization in a derivative of the narrow-bladed throwing-spear. To demonstrate this point in detail is difficult, for no extant *pilum* from a Roman site is certainly earlier than the Numantine War of 143–133 B.C.,[1] and the description given by Polybius belongs, so far as eyewitness goes, to the same generation of men, and at earliest to the generation after the Roman occupation of Spain. Consequently we have no evidence as to the antiquity of the earliest form of *pilum* which is directly known to us.[2]

Most modern archaeologists still follow Lindenschmit's opinion[3] that the *pilum* came to the Romans from Etruria. This opinion—based on one specimen of uncertain date, from Vulci,[4] and supported subsequently by one, better authenticated, from an early sixth-century tomb in the Museum at Perugia—obviously takes the problem only one stage further back, and leaves unsolved the question how or whence the Etruscans acquired the *pilum*. A comparison, however, of these rare early *pila* with the later varieties, and also with the trans-Alpine types to which we have seen reason to assign the name *gaesum*, makes it possible to reconstruct the main outlines of its development.

[1] These Numantine *pila* are referred to in *Jahrb. Kais. Archaeol. Instituts*, 1907, *Anzeiger*, p. 34, but are not yet published fully.

[2] The classical descriptions are in Polybius, vi. 23. 9–11; Dionysius of Halicarnassus, *Antiq. Rom.* 5. 46; Appian, *Celtica*, 1; Vegetius, 4. 20, 2. 13. The modern literature is collected in Mommsen-Marquand, *Manuel des Antiquités Romaines*, xi (Paris, 1891), pp. 28–9.

[3] *Die Alterthümer unserer heidnischen Vorzeit* (Mainz, 1864–81), iii. 6. 7. 1.

[4] Lindenschmit, *loc. cit.*; *Museo Gregoriano*, lxxxiv. 6.

The Roman *pilum* seems to have originated as an ordinary throwing-spear, with a socketed head of the long narrow type. Whether its direct ancestor is the four-winged Hallstatt type, or an early version of the long-necked but still lanceolate type which is perpetuated at La Tène, is a minor point: the four-square section of the neck points to the former; the distinct though diminutive head, so commonly prefixed in extant examples, suggests contamination, at least, with the latter.

But before the time of Polybius the *pilum* had undergone two principal reformations. In the first place, its head was very greatly elongated, so that the winged point and the conical socket came to be mere terminal appendages of an exaggerated midrib or neck, of cylindrical or four-square section. This phase is represented by the well-known specimen from Vulci, which though it is of uncertain date, and by no means certainly a Roman *pilum* in the strict sense at all, is of great value as proving the existence of this type in middle Italy at all.

The second modification of the *pilum* is more important. A long shaft, added to so long a head, would have been cumbrous; yet some weight was necessary to give the weapon a true balance. So the shaft was made short and thick; and this incidentally gave a better grip to the legionary and increased both accuracy and penetration. The new shaft tapered sharply where it fitted to the head; and the socket was made wider and shallower accordingly. But while the leverage of the long head and the weight of the shaft increased, the reduction of the socket made this mode of hafting quite inadequate, and led to the second reform, now to be mentioned. Without discarding the socket—for a Roman never willingly discarded anything which had once served any purpose—the head acquired a shaftward prolongation in the shape of a broad flat tang of varying length. This was inserted in a deep longitudinal cleft in the thick shaft, and driven home till the conical socket closed over the cleft point of the wood, and gripped it closely together. Then the whole was pinned firmly by two or more iron nails driven right through shaft and tang, or clamped externally by metal rings or ferules.[1]

This is the *pilum* described by Polybius in the second century B. C. Later improvements modified the temper of the point,

[1] The word λαβίς used by Polybius, vi. 23. 11, denotes any kind of 'grip' or 'clamp', and is applicable either to a ferule or to a rivet or nail.

the inordinate security of the hafting, and the diameter of the shaft, till in the second century A.D. the shaft was but little thicker than the head. But the wide conical socket persisted long after the shaft had shrunk, useless but significant, to cause interminable trouble to the antiquaries.

There is, however, some little evidence for the belief that the earlier Roman armies made regular use of a weapon which a later Roman would have described not as a *pilum* but as a *gaesum*. Livy, for example, in describing (rather obscurely) certain changes of equipment in the generation which followed the great Gaulish raid of 390 B.C., says[1] that each maniple of the legion included twenty *leves, . . . qui hastam tantum gaesaque gererent*, i.e. carried the hoplite-spear, of Greek origin and contemporary fashion, and also two or more light throwing-spears. The use of the *pilum* at this period was apparently confined to the *triarii*, for all the remainder were classed together as *antepilani*; even this attribution of the *pilum* to the *triarii* as early as the Latin War of 337 B.C. involves difficulties, unless the statement of Sallust that the Romans acquired their *arma atque tela militaria a Samnitibus*[2] refers exclusively to the First Samnite War of 343 B.C.: the Great War, of course, did not break out till 326 B.C. By Polybius's own time, of course, the *triarii* had ceased to use the *pilum* and had reverted for a while to the *hasta*.[3]

Another argument for the earlier use of the *gaesum* by the legions comes from Polybius's statement that for killing an enemy in battle a legionary was solemnly presented with a γαῖσον.[4] If the legions had always used the *pilum*, it is difficult to see when or how this custom could have arisen. If, however, the legions had at one time been armed with an undifferentiated throwing-spear, borrowed

[1] Livy, viii. 8. 6.

[2] Sallust, *Catiline*, 51. 38. Athenaeus, vi. 273, while attributing (as we have seen) the γαῖσον to the Spanish Iberians, confirms Sallust's statement so far as the shield (θυρεός) is concerned. Livy (ii. 30), on the other hand, describes the use (or rather the exceptional disuse) of the *pilum* in a battle which he dates as early as 492 B.C.: but compare Plutarch's use of ὑσσός in a passage (*Camillus*, 40) where the context shows that the *hasta* is intended.

[3] Polybius, vi. 23. 16. It was probably Marius who finally assigned the *pilum* to all ranks alike, as we find it in Caesar's time.

[4] Polybius, vi. 39. 3. First an ἐγκώμιον is pronounced; μετὰ δὲ ταῦτα τῷ μὲν τρώσαντι πολέμιον γαῖσον δωρεῖται, τῷ δὲ καταβαλόντι καὶ σκυλεύσαντι, τῷ μὲν πεζῷ φιάλην, τῷ δ' ἱππεῖ φάλαρα, ἐξ ἀρχῆς δὲ γαῖσον μόνον. The inference is that at one time the γαῖσον had been the regular weapon of all branches of the service.

from their fourth-century enemies the Gauls, it is easy to see how the old-fashioned weapon—which remained in use throughout among the auxiliary troops—should have been retained for the ceremony; and how a phrase 'to win a *gaesum*' should have survived, like our own phrase about 'winning one's spurs', long after the prize itself had lapsed or changed its character.

But the best argument for the derivation of the *pilum* from the Alpine and trans-Alpine long-bladed *gaesum* is morphological. The later *pila*, of the first and late second century B.C., varied a good deal in form, and in Polybius's time there were clearly two well-marked types, one stouter than the other. The former was evidently the more specialized and remarkable, with its long needle-like point, and its short, log-like shaft three inches or more in diameter.[1] The latter, in comparison, is undifferentiated and almost primitive, and Polybius himself compares it with a '*σιβύνιον* of moderate size':[2] it was carried in addition to the stouter type,[3] not as a substitute for it. Like the stouter form it had a short shaft, and a very long narrow point, of equal length with the shaft. The head, moreover, besides being socketed, penetrated the shaft, as we have seen, with a long flat tang for half its length. Of the completed weapon, therefore, two-thirds were wholly or partially of iron, and only one-third was wholly of wood. At the point where the iron joined the wood, the diameter of the iron was about a finger's-width and a half. The point, both of the stout and of the slender *pilum*, varied in details; but all forms agree in consisting of (1) the long flat tang enclosed within the shaft and riveted to it; (2) the conical socket already mentioned, enveloping and clamping together the cleft tip of the shaft; (3) an enormously elongated midrib, quite without wings, but often square in section. This last feature was partly, no doubt, for simplicity of manufacture; but it acquires further importance when we remember that the extremer forms of the long-bladed type in the Hallstatt area rapidly approach a four-square section in proportion

[1] This is the literal sense of the words of Polybius. No known *pilum*, however, shows any such shaft, and it has been suggested by Lindenschmit (*loc. cit.*, iii. 6. 7. 14 *a*) that this dimension is that of the peculiar conical rim of the socket of the *pilum* as shown on the tombstone of C. Valerius at Wiesbaden (Lindenschmit, *loc. cit.*, iii. 6. 5. 1). But the Wiesbaden monument belongs, at earliest, to a period more than two centuries after the death of Polybius.

[2] Polybius, vi. 23. 9 *οἵ γε μὴν λεπτοὶ σιβυνίοις ἐοίκασι συμμέτροις.*

[3] Like the *gaesa* of the fourth-century legionary in Livy, viii. 8. 6, v. above.

as their wings are reduced, and that it would not need much further specialization in the same direction to reduce both them and the ridges of the midrib to the appearance of mere ribs or angles on the surface of a rounded spike. Sometimes this spike was armed, in the *pilum*, with a diminutive head with wings or barbs, like those of the long-necked spears of La Tène; sometimes the four-square section ran out to the very point or was repeated on the head above-mentioned; sometimes the ridges or angles faded away into a smooth conical point.

It will be obvious from this description how closely the fully-developed *pilum* corresponded with the Hesychian description of the *gaesum* as an ἐμβόλιον ὁλοσίδηρον, 'a spear like a spit, made wholly of iron'; it had indeed a shaft, but for half its length this shaft was reinforced with iron; and it would be no exaggeration to say that the weapon was 'practically all point'. Moreover, the absence of wings and the frequent absence even of the little barbed head gave it a truly spit-like appearance.

The story that the Roman *gaesum* was borrowed from the Iberians of Spain comes to us, as we have seen, from a source which though learned, is late:[1] and it may reasonably be asked whether the Gallic *tumultus* of 225 B.C., or even the great raid of 390 B.C., does not supply a *verior causa* for its introduction. In the absence, moreover, of adequate evidence from Spain itself as to the spears of the Celtiberian iron age, we are not in a position to prove directly that any such weapon was ever in use there. At the same time, our knowledge of the ethnology of the peninsula would lead us to conclude *first*, that Spain suffered, very much in the same way as Italy, from the Gallic movements of the fifth and fourth century B.C.; *secondly*, that this meant the incursion into Spain of a militant element in a phase of culture which was transitional from the Hallstatt type to that of La Tène; *thirdly*, that, once established, this iron-using culture made use of the copious iron-supplies of the peninsula to release itself from dependence on the mines and forges of its place of origin, and to develop the weapons which it brought with it in original and more special directions, particularly if these at the same time simplified the process of manufacture by the omission of such refinements as grooves and re-entrant angles between ridges. These

[1] Athenaeus, vi. 273. It may, moreover, fairly be questioned whether Athenaeus is not transferring to the *pilum* the well-authenticated derivation of the legionary *gladius*.

are, in fact, just the conditions under which so special a form as the Roman *pilum* may reasonably be thought to have been perfected; and they supply some indirect reason for accepting as probable the ancient tradition that some form of Roman throwing-spear was of Spanish origin, and was adopted by the Romans as the result of their experience of Spanish warfare.

The considerations above stated as to the Spanish Iron Age stand in obvious relation to the statement of Herodotus that the Ligurians above Marseilles call their pedlars Sigynnae. Whither were these pedlars going, and what were they going to sell? The very small evidence which we possess goes to show that Spain entered late upon its Iron Age, and in particular that it depended long, both for bronze and for iron, on external sources of supply. In the North, at all events, the peninsula long remained under the influence of the culture of the continent to the north-east. The statement of Herodotus, therefore, which belongs, of course, to the century *before* the great Gallic inroads, is of the greatest value as an indication of what actually was going on: and the gist of it is this, that the Ligurians above Marseilles gave to the men who worked the transport-trade across their country a name which for Herodotus is that of a Danubian people. This transport-trade from the Danubian region into the Rhone basin was clearly in a westerly direction; and out to the west, for Herodotus and his contemporaries, lie only the Kelts, the Kynesii (whom Herodotus makes the most westerly of all) and the Iberian population of Spain. Here again we can prove nothing directly; but it does not need a great stretch of imagination to see Sequanian caravans moving from the Jura to the Pyrenees with their merchandise of wrought iron and sheaves of long-bladed *gaesa*.

(7) *The word 'Sigynna' is the name of a type of spear in Cyprus.* We are still very far from having shown the relevance of the last statement of Herodotus about the Sigynnae; that the Cypriotes call their spears by this name. But here the evidence is clearer. In the first place, there is no doubt about the Cypriote usage. Aristotle[1], in the fourth century, writes that the word σίγυνον is 'a regular expression in Cyprus, but with us' (that is, in the Aegean) 'it is a provincialism'. Here we have the word spreading from Cyprus into the rest of Greece: and if the word, then presumably also the

[1] Aristotle, *Poetics*, 21 τὸ σίγυνον, Κυπρίοις μὲν κύριον, ἡμῖν δὲ γλῶττα.

thing: and we know enough about the repute of the Cypriote iron-working in Hellenic times to accept this reasoning with some confidence.

Later on, the word *σίγυννα* and its variants did actually become fairly common; but its later meaning diverged from the earlier; and a late but learned commentator notes that the divergence was two-fold.[1] In its ordinary acceptation, the term *sigynna* included any spear which was 'scraped to a fine point', and this (though the word used—*ξυστόν*—properly applies to carpentry) exactly expresses the pencil-like sharpness of the *pilum* and all similar derivatives of the narrow-bladed type of spear.[2] But 'in Herodotus'—and it is only in the passage under discussion that Herodotus ever uses the word—*sigynna* signifies '*the* (well-known) throwing-spear, wholly of iron'; almost exactly the phrase by which we have seen that Hesychius interprets the word *γαῖσον*, namely, as a 'spit-like spear, wholly of iron'. It is clear from this that there remained, at least in learned circles, a definite tradition as to the meaning which the word had in Cyprus in the fifth century, two centuries and a half before the Roman adoption of the Spanish *gaesum* and more than two centuries before the date of the Gaesate *tumultus*.

Was there, however, any such weapon in use in Hellenic Cyprus? Here we are slightly better off than we were in the case of Spain: for several examples are known of a type of spear-head peculiar to this island, dating from the fifth century and earlier, and presenting resemblances to the Roman *pilum* so close that at the time of their discovery they were regarded with some suspicion as the result of some contamination of the find; several of them are in the Cyprus Museum,[3] they come from Tamassos, and were excavated by Dr. Ohnefalsch-Richter in 1885. They are not complete, and the longest fragment only measures 0·455 metre: their diameter is not stated in the printed catalogue, but as nearly as I can remember, it was between one and two centimetres. Another example is in the Fitzwilliam Museum at Cambridge: it forms part of a collection formed by Sir Henry Bulwer, in Cyprus, about the time of the excavations at

[1] Schol. Plato, p. 384 *σίγυννος δ' ἐστὶ ξυστὸν δόρυ, παρ' Ἡροδότῳ δὲ τὸ ὁλοσίδηρον ἀκόντιον.*

[2] We have already seen, moreover, how Polybius illustrates the lighter variety of *pilum* by comparing it with a '*σιβύνη* (*σιγύνη*) of moderate size'.

[3] Myres and Ohnefalsch-Richter, *Cyprus Museum Catalogue* (Oxford, 1899), No. 3926 ff.

Tamassos. Some of the objects in that collection bear tomb-marks showing that they are duplicates from Dr. Ohnefalsch-Richter's series; and though there is no documentary evidence on this point, I have little doubt that this weapon is a duplicate of *C. M. C.*, 3926 ff.

In the *Cyprus Museum Catalogue*, Nos. 3926 ff. are described as 'long cylindrical spits', an unconscious tribute to Hesychius's phrase ἐμβόλιον ὁλοσίδηρον; and when working at the *Catalogue* I had no better theory to advance. But the Cambridge example suggests difficulties: it is better preserved, and shows traces of a socket. Further, under date September 8, 1907, Dr. Ohnefalsch-Richter writes that several specimens were found, with well-preserved sockets, in grave 12 at Tamassos in 1889, along with a fine iron sword. The longest measured ·735 m. Others are in the Berlin Museum.

The circumstances of discovery preclude the idea that these are Roman *pila* which have gone astray. The Roman occupation of Cyprus in 58 B.C. was effected quite peacefully. Moreover, a tomb from Kition, now in the Grassi Museum at Leipzig, contains examples of the same type in *bronze* (length ·82–·90 m.) together with a bronze spear-head of sub-Mycenean lanceolate type, and sub-Mycenean pottery, probably of at least the ninth century.

We may, therefore, take it as certain that there existed in Cyprus, in the ninth century and earlier, a type of iron spear almost indistinguishable from the Roman *pilum*, and known in the fifth century by the name of the *Sigynnae*. But how did it reach Cyprus?

Our information about the Early Iron Age of Cyprus is not so copious as the extensive excavations would lead us to expect. Two iron spear-heads, now in the Cyprus Museum, from Tamassos (3921) and Amathus (3922), merely show translation of the normal late Mycenean bronze type[1] into the new metal. One-edged knives, also descendants of a late Mycenean type, are fairly common at Katydata and other sites of this period. And one very fine iron sword from Kurion has been published and discussed by Dr. Naue and by Dr. Arthur Evans.[2]

The type of sword to which this example belongs is unknown

[1] Well illustrated by *C. M. C.*, No. 3801, and *Brit. Mus. Cat. Bronzes*, No. 2770, both from Amathus.

[2] Naue, *Die vorrömischen Schwerter* (München, 1903), p. 25, n., Pl. VI. 4. Evans, 'Mycenaean Cyprus,' &c., in *Journ. Anthrop. Institute*, xxx, p. 218, fig. 15. Compare his review of Dr. Naue's book in *Man*, 1904, 24.

in the Early Iron Age of the Levant outside the island of Cyprus; but it occurs as a late Bronze Age form sporadically in Mycenean Greece and in Italy, and copiously round the head of the Adriatic, and on its eastern side as far as the Danube. Dr. Naue assigns this type to an Italian origin, but the distribution of the Italian examples is such as to suggest that they are the relics of small bands of invaders who brought the type with them, and did not succeed in naturalizing either it or themselves. I am therefore inclined to attribute it to the other half of its area of dispersal, and to regard it as the sword of somebody who lived, in part at least, *πέρην τοῦ Ἴστρου*, as Herodotus says, but who extended in part also *ἀγχοῦ Ἐνετῶν τῶν ἐν τῷ Ἀδρίῃ*; and whose culture is perpetuated, in this feature at all events, by that of the Hallstatt region; for the Hallstatt sword, as Dr. Naue has shown conclusively, stands in the direct line of succession to this Italo-Danubian 'Type II'. To find 'Type II' introduced into Cyprus—and into Cyprus alone (so far as we know) in all the Levant—as the regular form of Early Iron Age sword is, therefore, a striking commentary on the distribution of the *sigynna* type of spear.

As to the mode of communication between the Hallstatt region and Cyprus, two views are possible. The distribution of the sword-type suggests, at first sight, dispersal by means of the Adriatic seaways: and certain points in the series of fibulae and other bronze work, and also in the painted pottery of the early Iron Age in the Lower Aegean and in Cyprus, seem to support this view. We cannot forget, either, that the Taphian traders of the Odyssey—who put in at Ithaca with a cargo of iron, on their way to get bronze from Temese in South Italy (or was it Tamassos in Cyprus?)—ranged also as far as Sidon, and consequently within sight of Cyprus.[1]

But there is another possible connexion. We have seen already how Siginni, with their trousers and ponies, were recognizable by Strabo in the Caucasus, in an area which, as M. Chantre has shown,[2] shared, at least marginally, in the culture of the Early Iron Age of Europe; how a great iron culture existed in early Hellenic times among the Pontic Chalybes, and was exporting its wares *via* Ionia to the ports of the Syrian coast; and how the name of the Adriatic VEneti recurs in Homeric Paphlagonia, and seems to be presumed there still, in the phrase employed

[1] Homer, *Odyssey* i. 181 (Temese), xv. 427 (Sidon). The evidence of Strabo, 551, is strongly in favour of the Italian Temese.

[2] Chantre, *Mission en Caucase*.

by Herodotus. All this tallies wholly with the description of Apollonius Rhodius, who places his Danubian Sigynnae in Moesia alongside 'Scythians mixed with Thracians', at the junction, that is, between the stream of immigrants south-eastwards from Central Europe into the Aegean,[1] and the south-westward stream of nomads out of the grassland of South Russia.

Even so, we are not very close to Cyprus; and in the present state of our knowledge of the early history and culture of Cilicia and South Cappadocia, we have to fall back on indirect evidence once more. On the one hand there is the clear fact that the collapse of the civilization of the Aegean Bronze Age left Cyprus isolated within a Levant which was rapidly being Semitized by nascent Phoenicia; and that, isolated thus, Cyprus began to draw largely from a culture which was not Semitic, and *was* apparently Anatolian;[2] only ceasing to draw from it when the renascence of the Aegean permitted the anti-Semite factions in Cyprus to rejoin hands with their Ionic kinsmen. The piratical attack on Sargon's exposed sea-flank in Cilicia in 718 B.C. very nearly marks an overlap of the two phases; for Sargon clearly regarded this as a sea-raid, a concerted movement by allies of his foes in Cappadocia.

Under these circumstances there is no difficulty in supposing that Cyprus acquired important elements in its Iron Age culture from an Anatolian source. Whether among these elements we are to include any part of its iron metallurgy or its types of weapons must still be uncertain, as long as what I may call, for short, the 'Taphian route' remains a possible alternative; and on this point excavation alone can decide. What is chiefly wanted is (1) accurate evidence about even one of the early sites in Cilicia; (2) surface exploration in Pontus, to test on the spot the Greek beliefs about the metallurgy of the Chalybes; and (3) thorough excavation of the Late Minoan settlement at Tarentum, which, originating as it does in a period which must be closely contemporary with the Mycenean colonization of Cyprus, lasts on like the Mycenean settlements in Cyprus in a state of suspense; falls into a decadence so nearly identical as to raise the suspicion that some sort of direct communication

[1] This stream also is traceable backwards, as we have seen, at all events as far as the Homeric Age.

[2] This is not the place to maintain this thesis in detail; the more obvious materials are discussed in my paper, 'On the Early Pot-Fabrics of Asia Minor,' in *Journ. Anthrop. Institute*, xxxiii. 367 ff; esp. p. 393.

was maintained throughout, and finally revives, like Cyprus, into a new local Hellenism, and becomes a great outpost of Greek trade and industry.

I conclude by summing up, briefly and dogmatically, the results to which the evidence here collected seems to point. The Sigynnae represent a people widely spread in the Danubian basin in the fifth century B.C., from opposite Thrace to the head of the Adriatic. They were trading across the Rhone valley westwards at that time; and Siginni are found, later, to have established themselves in the Caucasus among peoples of kindred culture. They are very likely identical with the Sequani of the first century B.C., and their culture is that of the trouser-wearing, pony-driving region in which Herodotus places them. His scepticism as to their Median ancestry is justified; if there was any connexion between them and the trouser-wearing conquerors of Media, it was probably the other way round. The clue supplied by Herodotus as to their westward trade, together with the form of their name and its derivatives, connects them with the iron-working culture of Hallstatt and later of La Tène. This culture, intrusive both into Spain and into Italy, gave rise *inter alia* to a highly specialized series of narrow-bladed, and eventually wingless, throwing-spears, which culminate in the *gaesum* and the *pilum*. Then, the other clue supplied by Herodotus, as to the name of a spear-type in Cyprus, enables us to use these West-Mediterranean materials to identify extant examples of this *sigynna*-spear; to attribute these early Cypriote *pila* to a northern origin, remote but perhaps direct; and so to get some light on the nature of the process by which iron-working was introduced into Asia Minor and the Levant, and in particular on the circumstances under which the Caucasian Siginni may be supposed to have effected their migration.

I trust that this attempt to comment at some length on a typical 'Herodotean digression', inadequate though the materials are—and though the treatment therefore must necessarily be—has at least been sufficient to show that modern archaeology, and still more modern ethnology, has much to contribute to the interpretation of an author who, according to the light of his age, set himself as his life-work to 'save from oblivion the deeds of men whether Greek or barbarian', and, more than this, to discover 'from what cause' arose the eternal struggle between East and West in the Mediterranean.

A MUSEUM OF ANTHROPOLOGY

By C. H. READ, F.S.A.

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In a volume of this kind it is hardly necessary to enlarge upon the value and importance of a museum of anthropology. I have on several occasions, at the British Association and at the Anthropological Institute, insisted that the creation of such a museum is a duty that England owes to herself, that it would render definite service to the State, and that it could be formed at less cost by England than by any other country. While England is lethargic, Germany has created an ethnographical collection in Berlin ten times the size of that in the British Museum, and equal in importance to all the similar collections in England put together. How posterity will regard such supineness one can hardly foresee, but there will surely be some regret at the loss of opportunity to secure a tangible record of the conditions of the many primitive races that still exist, though they are inevitably changing.

For practical reasons, as well as for scientific completeness, the collections of physical anthropology should form part of the same institution as those relating to ethnography. They are often apt to overlap in their practical aspect, while the study of the divisions of the human race must necessarily include both. To a certain extent, moreover, such an arrangement would be an economical one as regards the staff. By far the greater part of the exhibition space would of course be given up to the ethnographical section. Collections of this kind need far more space for their proper display than is devoted to them in any museum in Europe. Perhaps the best equipped in this respect is the American Museum in New York, where certain sections are shown in an ideal way. Adequate exhibition is a sure step towards popularity, and no public museum can hope to exist without the appreciation of a large public apart from specialists. Such a policy not only attracts donations and support in other

directions, but it has an effect of even more lasting value, that of creating new schools of students, new lines of study, and of constantly imparting a new impulse to the whole machine. Thus a great area of exhibition space must of necessity be devoted to ethnography. The differences in the physical characters of the human skeleton are in the main more difficult for the lay mind to follow, and for this reason there is less need for devoting much space to their display to the general public, who would naturally take a greater interest in the published results. There are, in fact, two distinct reasons for exhibiting objects in a museum. The first, and more serious one, is exhibition for the purposes of instruction, the second is for the edification and the entertainment of the unlearned majority, and, for the reasons just stated, both must be kept well in mind if the museum is to meet with public support. Thus a very large part of any scientific museum must be given up to the display of collections which, if the serious work of the institution were alone considered, might in the main be arranged in drawers or cupboards with a great saving of space.

The foregoing paragraphs deal with the conditions of a museum where the material with which it deals has already been gathered; but it may be well to add a few words pointing out the principal ways in which such a collection may even now be formed, and the help that may be got towards bringing it into existence.

Unfortunately, in a sense, it may be assumed that no Government of a great empire like our own will of its own motion take steps in any such direction. It is only in smaller countries that time can be found for a Government to foster science or learning for its own sake, as a factor in the future well-being of the people. Exceptions are occasionally found where the ruler or a member of his family may take a far-sighted view of the ultimate public good, and by the exercise of a vigorous personality, produce the same results, with the aid of the public purse, as if the Government itself had taken action. Such a condition is, however, so rare that it may practically be left out of account. It does, however, exist, and where it exists, produces no small effect.

In England, almost all great enterprises, from the possession of the Indian Empire downwards, have had their origin in the adventurous spirit of private individuals. Their small beginnings have at length attained to such greatness as to force the attention and even sympathy of the Government, and in this way the

empire has been built. Such being the case in the past, it is wise not to look to the central government for more than a 'grant in aid', and a few benevolent platitudes, until such time as the scheme has so ripened as to command attention. There is, however, one way in which the Government machine may be made to contribute towards the success of an anthropological museum. The Foreign Office, the Colonial Office, and the Intelligence branch of the War Office and the Admiralty, have in their employ, or under their control, a vast army of trained intelligent officers, who, if they will, can very materially help in such a work. The one condition necessary, however, is that the work in this direction that such officers perform should be carried on with the approval and sympathy of their superiors at home, and that the work, adequately performed, should be regarded as creditable by the central office so long as it be done without interfering with their primary duties.

Assuming, then, that the Colonial Office, for instance, authorizes the officers of the Anthropological Museum to invite the co-operation of Colonial Governments and their subordinate officers in the formation of such collection in London, it would be found that of such officers about one in ten would be eager to employ his intelligence in leisure time in such work. If, therefore, one-tenth of the forces abroad from the above-mentioned departments could be induced to promise their help, what might not be done in the way of collecting in all branches of anthropology? One incidental result would ensue. We should then have in London a teaching agent of inestimable value, viz. a place where English people at home could form an idea of what the British Empire means. The Indian and Colonial Exhibition was the only thing that at all answered the question, but how many ordinary English people remember it now, after a lapse of twenty years, except in the mistiest way? I am not forgetful of the existence of the Imperial Institute. It is now doing good work, and is becoming a bond between the Colonies and England: but a series of lamentable mischances in its early life has irrevocably shorn it of much of its glory and comprehensive character.

So much, however, for government aid. There are fortunately other helpers. The great trading companies, whose enterprises take them among uncivilized races, are usually very ready to lend their aid in scientific matters, while many of the individuals governing their affairs are not infrequently men of great breadth of view and occasionally ready to help in forwarding the cause out of their own pockets.

Where one adds to these the religious and scientific missions, all of them again supported by private funds, it would seem that there need be no fear as to the success of such an obviously necessary institution as an anthropological museum.

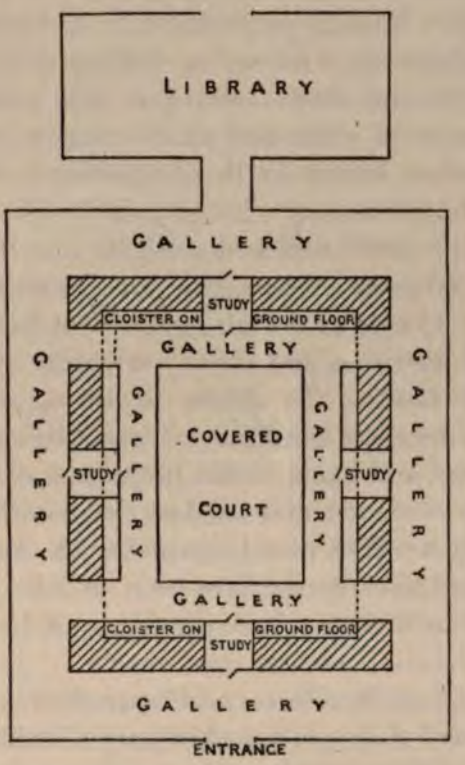
The collections having been got together, the next question is the best system of arrangement, and what kind of a building is the best for the purpose. As to the first, it is generally agreed that for a general ethnographical collection the geographical system is the most practical and the most advantageous; the most practical because both the student and the public know more readily where to look for a given object, and the most advantageous because the geographical plan, apart from its more apparent benefits, begets a kind of patriotism or local pride in the workers in particular areas. A man, for instance, who has spent the greater part of his life in Borneo, will generally find a special satisfaction in seeing the collections he has made arranged as a unit in a museum. Whereas, if they were dispersed under some plan of showing the development of special crafts, his satisfaction would take a modified form. Another objection to the evolutionary arrangement is that the student cannot gain an idea of the state of culture of any particular people.

In every such museum, however, the ideal system would be to have practically a duplicate collection in many branches, in order to nourish subsidiary series demonstrating the evolution or distribution of particular types. In very many cases, however, such demonstrations can be as well or even better furnished by drawings or photographs, especially where the originals are at hand for reference and more effective demonstration.

I speak here only of the ethnographical specimens, for the exhibited portion of the physical anthropology would be comparatively simple to deal with and relatively small.

There are doubtless many types of building that would serve the purpose of an anthropological museum, but I think the most practical ground-plan is that of two oblongs, forming galleries, one within another. The outer one and part of the inner would contain the ethnography, the remaining portion of the inner one the physical section. The two would be connected at intervals by rooms to form workrooms for the staff, or small galleries containing the subsidiary series spoken of above. The parallel galleries have, moreover, a definite and practical advantage, inasmuch as they allow of the closing to the public of any section of any gallery without stopping the cir-

culation. At the beginning of the closed part of the outer gallery, for instance, the public would be diverted into the inner one, and emerge again into the outer gallery at the end of the closed portion. Experience has shown that such a plan has great practical value in dealing with the re-arrangements which are constantly necessary.



The place here advocated is, of course, capable of infinite modification while retaining the general principle, which is the only essential part. In a hall or vestibule might well be placed an index series to give the visitor a general idea of the meaning of the collections. Further, in an annex of some kind should be placed a library, without which no museum can pretend to be complete.

This brings me to another part of the ideal museum scheme; the office for the collection of anthropological information.

It would seem an obvious matter that in England, and under the control and superintendence of the Government, there should exist a central office, where all information relating to native laws and customs should be gathered together, and so arranged as to be useful to the officers proceeding to take over the government of a

particular district. No adventurous trader would think of putting responsibility among uncivilized peoples upon a young man fresh from school or college without giving him a chance of learning the essential conditions of his district. He would have to learn the language to some extent, to master the system of trade, and to familiarize himself with such of the customs and religious beliefs as relate to daily life. Such a preparation in commerce is considered an essential preliminary, whereas in dealing with the government of primitive peoples any such training is held to be almost entirely negligible. It must be confessed that owing to some sympathetic qualities which seem innate in the Anglo-Saxon blood our heterogeneous empire has grown up with singularly few serious blunders, in spite of the haphazard empirical methods that have ruled it. But the relations of empires and peoples are inevitably undergoing a change from the old rule of thumb system that has hitherto sufficed, and more precise, accurate, and strictly scientific methods will be the rule in the near future. To attain to these, wide and detailed knowledge of the domestic conditions, of the religions or superstitions, of the daily habits, and even of the prejudices, of every native community has to be obtained and used as the foundation for the new departure. Many a native revolt, involving the loss of much money and many valuable lives, could have been avoided, if only the white man had been able to enter into the ideas of his brown or black neighbour.

For these reasons, therefore, quite apart from the gain to science, some such bureau of anthropological inquiry should exist in England. Some years ago I formulated such a scheme before the British Association, with the suggestion that it should be under the auspices and superintendence of the Colonial Office. Eventually, however, it was decided that it should be established in my department at the British Museum. There I have done the best in my power, but I realized from the first that it could not attain to anything like perfection without a much larger expenditure than could be allocated to a small department. By the circulation of copies of the 'Notes and Queries' issued by the British Association, and also of special 'questionnaires' prepared for special districts, a good deal of information has been obtained, and no small amount of incidental benefit has accrued to the museum. One unexpected result also has come about. The questions issued have been used as the foundation of published works by officials of various protectorates—a result

by no means to be deplored, though it does not serve the immediate purpose of the bureau.

It would no doubt be an ideal system to deal with the information gained by publishing it in the form of monographs, as is done by the Smithsonian Institution at Washington. But in America the field, though large, is at any rate limited, and even then, is no doubt a costly affair. With us the amount of material would be ten times as great, and adequate publication would mean a great outlay. The Société belge de Sociologie also has formulated a scheme which has been set out in a pamphlet entitled 'Enquête ethnographique et sociologique sur les Peuples de civilisation inférieure' (Brussels, 1905), and M. Joseph Halkin presented a report to the Congrès International d'expansion économique mondiale de Mons, under the title 'Une Enquête ethnographique mondiale' (Liège, 1905). The former has a purely scientific purpose, while the latter aims more at advantages to trade. Both, however, contain a good deal of common sense and useful suggestions, which it would be well to bear in mind in starting any survey for scientific purposes. The questionnaire in the first-named of the two pamphlets is, like the report, from the hand of M. Halkin, and is divided in a way easy to comprehend and follow. The divisions are as follows: 1. Vie matérielle; 2. Vie familiale; 3. Vie religieuse; 4. Vie intellectuelle; 5. Vie sociale; and 6. Caractères anthropologiques, divided into 'somatiques' and 'physiologiques'. Under each of these heads are given suggestions for detailed questions which are, of course, capable of infinite expansion and variety according to the needs of special districts. The physical section especially is too limited in its range in this Belgian scheme.

If a country like Belgium finds that inquiries of the kind are justified with such a limited area as it possesses for their application, how much the more are they necessary in England. But to be of real use the bureau must be a definite institution, having intimate and sympathetic relations with the various branches of the Government, it must have a director who should be a trained scientific man, and an adequate staff to assist him. Under these conditions, a bureau of anthropology for the British Empire would be an eminently useful branch of the public service.

THE NINE WITCHES OF GLOUCESTER

By SIR JOHN RHŶS,

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The passages bearing on the Witches occur in the story of Peredur. That knight in his wanderings came once on a time to a castle on a mountain: then follows an episode which will be found in the Oxford volume containing 'The Mabinogion and Other Welsh Tales', pp. 210, 211, to the following effect—'And when Peredur came into the hall there was a fine tall woman sitting in a chair, with many handmaids around her; and the lady welcomed him. When they found it time they went to eat: when they had done eating, she said, "It were well for thee, prince, to go to sleep elsewhere." "Why should I not be allowed to sleep here?" said Peredur. "There are nine witches here, my soul," said she, "of the Witches of Gloucester, together with their father and their mother; and by daybreak it is not more likely that we escape than that we are killed by them.[1] They have conquered the dominion and laid it waste except this one house." "Well," said Peredur, "it is here we shall be to-night, and if trouble overtakes you I shall, if I can, be of service to you: at any rate it will not be the contrary of service on my part." They went to sleep, and at the dawn of day Peredur heard a terrible cry. He rose quickly in his shirt and trousers, with his sword hanging round his neck, and he went out. What he beheld was a witch overtaking a watchman, who was crying out. Peredur made for the witch and dealt her such a sword-stroke on her head that it flattened out her helmet and headgear like a dish on her head. "Thy protection, fair Peredur son of Efrawg, and God's protection!" "Why, hag, knowest thou that I am Peredur?" "It is destiny and vision that we suffer at thy hands, and that thou on thy part obtain a horse and arms from me. Under my charge shalt thou learn to be a knight and to handle thy weapons." "Thus," said

[1] Lady Charlotte Guest (*Mab.*, i. 323) has mistranslated this sentence—'and unless we can make our escape before daybreak, we shall be slain.' M. Loth's translation is also wrong: see *Les Mabinogion*, ii. 69.

Peredur, "shalt thou have protection, namely, if thou give thy troth never to do any wrong in the dominion of the Countess." Peredur took security on that score, and, with the leave of the Countess, he set off with the witch to the Court of the Witches. There he abode three weeks on end: then he chose him a horse and arms, and thereupon he set off.'

The sequel at the end of the *Peredur*, pp. 242, 243, connects the Witches with the Grail Stories: see Nutt's *Studies on the Legend of the Holy Grail*, pp. 101, 139, 143, 156. The *Peredur* passage runs to the following effect:—'"Lord," said the young man, "it was I who came in the shape of the black maiden to Arthur's Court; and when thou didst throw the chessboard, and when thou didst kill the black man of Ysbidinongyl, and when thou slewest the stag, and wert fighting with the man from the Llech. It was I also that brought the head bleeding on the dish, and the spear which had a stream of blood trickling along the shaft from the point to the heel. The head was thy cousin's, and him the Witches of Gloucester had killed; it was they also that lamed thy uncle. I am thy cousin, and it has been predicted that thou wilt take vengeance on them." Peredur and Gwalchmai took counsel together and sent to Arthur and his household to ask him to come and attack the Witches. They began to fight with the Witches, and a man of Arthur's was slain in the presence of Peredur by one of the Witches, though Peredur forbade her. The second time the Witch slew a man in Peredur's presence, though he forbad her again. And the third time the Witch slew a man in Peredur's presence, whereupon Peredur drew his sword and struck the Witch on the top of her helmet so that he split the helmet and all the armour together with the head into two halves. She uttered a cry and bade the other Witches flee, saying that it was Peredur who had learnt knighthood with them, the man who was destined to slay them. Then Arthur and his household struck in among the Witches, and the Witches of Gloucester were all slain.'

Here in both passages the word for witch or sorceress is *gwidon*, plural *gwidonot*, which would be in modern spelling *gwiddon*, *gwiddonod*. The singular occurs also in two passages in the *Story of Kulhwch and Olwen*, pp. 123, and 141, 142. Both relate to the necessity for Arthur of procuring the blood of *y Widon Ordu*, 'the very black witch,' daughter of *y Widon Orwen*, 'the very white witch,' from Pennant Govud on the confines of Hell; and the second of them runs thus:—'Arthur set out towards the North, and came to the place

where the hag had her cave. Gwyn, son of Nudd, and Gwythyr, son of Greidawl, counselled that Kacmwri and Hygwydd, his brother, should be let go to fight with the hag. As they got inside the cave the hag was beforehand with them: she seized Hygwydd by the hair of his head, and struck him down under her. And Kacmwri seized hold of her, and pulled her down from off Hygwydd. She turned round upon Kacmwri: she belaboured them both, she disarmed them and drove them out uttering cries of dire distress.[1] Arthur grew wroth at the sight of his two servants all but killed, and he tried to make a dash into the cave, whereupon Gwyn and Gwythyr said to him: "We think it neither nice nor amusing to see thee engaged in a scratching match with a hag: let Hiramreu and Hireiddil go into the cave." They went, but though the trouble of the previous two was great, greater was the trouble of the latter two. Heaven knows that not one of the four could move from the place, except for their being placed on the back of Llamrai, Arthur's mare. Then Arthur made a dash into the opening of the cave, and cast Carnwennan, his knife, at the hag, and hit her in the middle so that she fell asunder in two hulks. And Caw of Prydain took the witch's blood and kept it in his charge.'

Both in the *Kulhwch* and the *Peredur* the witch is addressed as *gwrach*, 'hag'; but in the former the hag does not appear to have any armour: she uses her hands, and Gwyn and Gwythyr evidently feared to see her using her nails in a conflict with Arthur. It was otherwise with the Witches of Gloucester: they wore helmets, and apparently other armour. The *Peredur* story associates prophecy and prediction with them, though not in such terms as to prove beyond doubt that they themselves were the authors of any such prediction any more than Peredur's cousin, who also knew of the prediction that the former was to destroy the Witches.

The word *gwiddon* is used by our fourteenth-century troubadour D. ab Gwilym in his *cywydd*, clix, line 62—

Cryglais gwiddon mewn croglath.
'The hoarse voice of a witch in a noose.'

Dr. Davies in his Dictionary has *gwiddon* explained as 'malefica, saga, gigas fæm'. The modern tendency in books is to make the word into *gwiddan*, which Pughe in his Dictionary explains as 'A hag;

[1] Lady Ch. Guest renders it 'with kicks and with cuffs', and M. Loth translates to the same effect (*Les Mab.*, i. 282); but I prefer the above.

a witch; a sorceress; a giantess,' together with a derivative *gwiddanes*, 'a witch.' This last is used by the Bardd Cwsg with *y* for *i*, and he has also the simpler *gwyddan*: see Prof. J. Morris Jones's edition, pp. 51, 55, 189. On the other hand I am familiar in North Cardiganshire with a stream called Nant widdon, in Dyffryn Castell: it falls into the Castell river on the left-hand side as one proceeds from the Inn to Eisteddfa Gurig. The name is sometimes pronounced *Nant widdol*; but I presume *Nant widdon* to be more correct, and to stand for Nant y Widdon, 'the Brook of the Witch.' The outcome of this is that the oldest and best attested spelling is *gwiddon* and not *gwiddan* or *gwyddan*: so the origin and history of the word are left all the harder to explain.

On reverting to the passages in the *Kulhwch* and the *Peredur* one may take it that the *gwiddon* in the former was an ordinary witch or ogress living alone in a cave, while *Gwiddonod Caerloyw* in the *Peredur* were warrior women or amazons, who were regularly armed for both offensive and defensive action; and they had a settled home called *Llys y Gwiddonod*, 'the Witches' Court,' where they had with them their father and their mother. There also they taught the young men who came to them feats of arms and all that was understood by chivalry in the society to which they belonged. That society was evidently the same to which belonged Scáthach figuring in the Cúchulainn stories, which I have summarized in my *Celtic Heathendom*, pp. 450–5, 480, 481.[1] Scáthach is also represented as having her court somewhere in Britain, though that statement is somewhat obscured by the account of the access to her court being taken from the stock description of the Bridge of the Dead. For it is evident that these stories are composed of two elements, the mythical and the historical. The female warrior is not mythical, but belongs to early Irish history: the employment of women as warriors was only discontinued in the last years of the seventh century. This advance in humanity is usually associated with the name of Adamnan as the Law of Adamnan, otherwise

[1] The whole requires revision, but I will only mention here the place called in Irish, p. 451, *Glenn n-Gáibthech*, 'the Sorrowful Glenn,' where *gáibthech* is the adjective from *gábud*, which is the same word as Welsh *gouut*, now pronounced *gofid*, though the spellings *gofyd* and *gofud* also occur: see Dr. Davies, s.v. At all events the Welsh 'Pennant Govud' on the confines of Hell comes sufficiently near *Glenn n-Gáibthech* to testify to the common origin of the portion in question of the Welsh and Irish stories.

called *Cáin* or *Recht Adamnáin*, and *Lex Innocentium*.[1] Accordingly there need be nothing essentially non-historical in the whole incident where the Witches of Gloucester figure except the predictions. It all points to a Goidelic head quarters somewhere in the neighbourhood of Gloucester. Various other facts seem to point in the same direction, that is to say, to the land of the ancient Silures; among them may be mentioned the comparatively large number of Goidelic names of places and persons within the ancient boundaries of the diocese of Llandaff as represented in the *Liber Landavensis*. Attention has been called to the most remarkable of them in a paper of mine entitled 'The Goidels in Wales': see the Journal of the *Archaeologia Cambrensis*, 1895, pp. 18 et seq.

The names imply a considerable invasion of the country west of the Severn estuary by Goidels sailing up that water; and the date may be guessed to have been from the second century to the sixth. Possibly it was a continuation of the movements of the Déssi, who occupied Demetia in the latter part of the third century: see the *Ar. Cam. Journal*, 1892, pp. 65, 66. Here may be noticed Geoffrey of Monmouth's mention, in his *Hist. Regum Britanniae*, iii. 10, of Kaerosc, otherwise Caerleon or *Urbs Legionis* as 'metropolis Demetiae' before the advent of the Romans. We need not imitate him in putting Caerleon back to such an early date, but a point to be noticed is his having got somewhere the idea of extending Demetia so as to include the land of the ancient Silures (Geoffrey, iv. 15). I gather that the authority which he followed made the Goidels of Demetia and those of Siluria the same people, with their centre of gravity in the latter rather than in the former. Further, the mabinogi of Pwyll, Prince of Dyfed or Demetia, gives that prince a liegeman in Teirnyon Twryf Vliant, prince of Gwent Iscoed or Nether Went, in what is now Monmouthshire. This occurs towards the end of the mabinogi (*Mab.*, p. 22), which closes with a few words about Pwyll's son and successor, Pryderi, to the effect that the latter, when it occurred to him to marry, chose as his wife Kicva, daughter of Gwyn

[1] The following are the principal references in point—I owe most of them to a friend's kindness: Reeves, Adamnan's *Vita Columbae*, pp. l, liii, 179; *Félire Óingusso*, Sept. 22, and p. 211 of Stokes's ed. 2; *Cáin Adamnáin* (ed. K. Meyer), Oxford, 1905, pp. 5 et seq.; Windisch's *Irische Texte*, p. 193, ll. 6–8; 'Annals of Ulster' (vol. i, ed. Hennessy), A. D. 696 (pp. 144–7); O'Donovan, 'Annals of the Four Masters,' A.D. 703, note *u* with references to the Speckled Book, fo. 38^{b}, and the Book of Lecan, fo. 166, p. a. col. 4; and D'Arbois de Jubainville's *Famille Celtique*, pp. 81–3.

Gohoyw, son of Gloyw Gwallt-lydan, son of Casnar *Wledic* ('C. *dux*') of the rulers of this island. Now Kicva is a decidedly Irish name, which figures in the early and legendary portion of Irish history: see the 'Four Masters' Annals of the Kingdom of Ireland', A.M. 2520. Kicva's father is called in the mabinogi by a name which may be the Welsh rendering of some such Irish designation as *Finn Foséim*, but I am more inclined to regard *Gohoyw* as a corrupt version of *Gloyw*. As soon as the two stood there side by side the latter was provided with the epithet *Gwallt-lydan*, 'Wide-haired,' elsewhere *Gwalltir*, 'Long-haired,' and *Gwlad-lydan*, perhaps 'Widely-ruling'. This conjecture is borne out by the beginning of the third mabinogi, that of Manawyddan, son of Llyr, where Pryderi is made to describe his queen simply as Kicva, daughter of Gwyn Gloyw. We gather that the scribe felt readier to add at the end of the one mabinogi than in the body of the text of the other: one is almost certain to be right in giving the preference to the shorter text.

The question now is how *Gwynn Gloyw* is to be interpreted: at first sight one might render it 'White-shining' or the 'White and bright'; but more likely one should treat *Gwynn*, 'white,' as the whole name, and regard it as equivalent to the Irish *Finn*. Then *Gloyw* has to be treated as the epithet, but that epithet admits of two explanations: treated as an adjective we should have 'Gwyn the Bright or Shining', but otherwise and better it would be 'Gwyn of Gloyw', that is to say of *Glēvum* or Gloucester, for *Glēvum* must be *gloyw* in Welsh; or rather the Latin name was the neuter of the Brythonic adjective *glēvo-s*, *glēvā*, *glēvo-n*, now *gloyw* or *gloew*, 'bright, shining.' Possibly *Glēvum* has superseded some such a longer form as *Glevo-castra*, or *Glevo-dūno-n*, 'Shining fortress.' The way in which such names have been treated is very well illustrated by the case of Caerfyrddin, 'Carmarthen,' which means the *caer* of *Maridunon*, that is the fortress of the Sea-town; but this was forgotten, and *Maridunon* which became *Myrddin* was treated as a man's name, so that the whole came to be interpreted as Myrddin's Caer. Here Caer Loyw, that is the Caer of *Glēvum*, came to be Gloyw's Caer, with *Gloyw* made into a personal name:[1] compare Geoffrey, iv. 15, making Gloyw either into Claudius or a son of his, 'Gloio duce.' According to the text of the Pwyll with its *Gloyw Wallt-lydan*, Gloyw was

[1] Mr. Nicholson suggests to me that *Arianrhod* was likewise a place-name, an *Argentorātum* in Britain. If so, perhaps, the lady's original name underlies the modern *Elan*, which recalls *Ethlenn*, genitive of the name of the Irish Lug's mother.

made into a man, who came to be treated as the ancestor of the Goidelic family of invaders to whom Kicva belonged; and lest that should not be good enough Gloyw is made to be of the line of duke Casnar of the rulers of this island. His line[1] is mentioned by the twelfth-century bard Cynddelw: see the *Myvyrian Arch.*, i. 239, where we read *Ef oed lary o lin Gasnar*, 'A bounteous one was he, of the line of Casnar.' In any case the lady with the Irish name Kicva is associated with *Glevum* or Gloucester, and her home was possibly no other than that which the *Peredur* calls *Llys y Gwiddonod*, 'the Court of the Gwiddonod.'

There is more to be said of the shadowy personage called Gloyw, for the pedigree of Fernmail king of Buallt about the end of the eighth century (Zimmer's *Nennius Vindicatus*, pp. 70–3) is made to end with him in the *Historia Brittonum* with which the name of Nennius is usually associated. See Mommsen's 'Historia Brittonum cum Additamentis Nennii' in his *Chronica Minora*, iii, § 49 (pp. 192, 193), where the names in point run thus:—'filii Guorthigirn Guortheneu, filii Guitaul, filii Guitolin, filii Glovi . . . qui aedificavit urbem magnam super ripam fluminis Sabrinae, quae vocatur Brittannico sermone Cair Glovi, Saxonice autem Gloecester.' *Guorthigirn* is the regular form in Old Welsh of Vortigern's name, Vortigernios, and in later Welsh it has successively become *Gwrtheyrn*, *Gwrthéyrn*. In the next place some of the MSS. have forms which point to *Guitolion* as the preferable reading here, and I take *Guitolin* and *Guitolion* to be distinct names derived from the Latin *Vitalinus* and *Vitalianus* respectively: see the *Cymmrodor*, 1905, pp. 72–4. Lastly for *Glovi* one should restore *Gloiu* or *Gloiv*, and then one may turn

[1] Is it possible here that *Casnar* was originally an error for the Latin *Caesar*, meaning Claudius Caesar? The numerous coins of that emperor found at Gloucester seem to connect him with that city, which Geoffrey calls *Kaerglou* (San-Marte's text, iv. 15) and interprets as named so perhaps after the Emperor, as if *Glou* or *Gloyw* could be an equivalent for the name *Claudius*. So the Red Book translation of Geoffrey knows Claudius only as Gloyw (Oxford *Bruts*, pp. 94–7), while the versions published in the 'Myvyrian Arch. of Wales' (ii. 187–94) call him *Gloew Kesar* and even *Gloyw Casar*. Cynddelw's metre does not require *Casnar* or *Cesar*, nor does *casnar*, 'indignation, wrath, ire' (Silvan Evans's *Geiriadur*, s. v.) suit the sense. It is interesting to notice that 'lary o lin Gasnar' seems to have suggested to the Kulhwch story-teller his 'Llary m. Kasnar wledic' (*Mab.*, p. 107), which appears in 'Rhonabwy's Dream' (*Mab.*, p. 160) with *Kasnat* for *Kasnar*. It helps one to understand how the lists of characters in these tales were made up; and it is needless to say that Cynddelw's *llary* is not a proper name, but simply the Latin adjective *largus* borrowed and reduced to a monosyllable *llarj*.

the names back into Latin thus: 'filii Vortigernii, filii Vitalis, filii Vitaliani, filii Glevi.' *Vitaliani* is the genitive on a bilingual stone at Nevern, in Pembrokeshire, and it is not improbable that it marked the tombstone of Vortigern's grandfather. Recently another bilingual stone has been found there: see the *Archaeologia Cambrensis* Journal, 1907, pp. 81–92, 310.

It has already been suggested that the Irish invaders were the Déssi and tribes allied with them, and I have elsewhere expressed my view that they at one time haunted the coasts from Kerry to Kent. On this side of the Irish Sea they had perhaps their largest settlement in Dyfed or Demetia, within which are the village and landing-place of Nevern; and in this connexion it is to be borne in mind that Vortigern's name occurs more than once in the Irish territory of the Déssi, in the County of Waterford, whence they crossed to Dyfed. Far east from Dyfed we come to the lower valley of the Wye, where the Déssi were probably the founders of the kingdom of Buallt over which the Fernmail already mentioned reigned in later times. Moving further eastwards we seem to detect the Déssi by means of the Irish names in the *Liber Landavensis*; and on the Severn somewhere about Gloucester we find the home of the Irish Princess Kicva; not to mention that Fernmail's pedigree associates his ancestry with Glevum itself. The Severn Sea would seem to have been one of the highways of Goidelic invaders, and one of the Glamorgan places called *Banwen* was the *Bannaventa* from which Professor Bury (*Life of St. Patrick*, pp. x, 17, 321) supposes Irish rovers to have carried Patrick away to Ireland. Add to this, that on the Somerset side an old inscription occurs marking the grave of a *Nepus Carataci*, a decidedly Goidelic description of the deceased, practically meaning Carthach's uterine Sister's Son, according to a common Irish formula. The coasts of Cornwall and Devon have their Ogam inscriptions and bilinguals to show, and the series ends at present with the Ogam stone found some years ago in the excavations on the site of the Roman city of Calleva, now known as Silchester, in Hampshire. To complete the series, and practically to establish the view here suggested, one only requires an Ogam inscription or two to be discovered in Sussex or Kent. The hypothesis fits also in other respects: among other things it helps to understand Vortigern's movements,[1] and even to account to some extent for the incest in

[1] Why does Geoffrey call Vortigern *consul Gewisseorum*? Can the original have been some form of *Powisorum*?

his biography. For that has its parallels in Irish legend: compare, for instance, the story of Corpri Musc in the Book of the Dun Cow, fo. 54[a], see also 'Celtic Heathendom,' pp. 308, 309, and 'The Welsh People', pp. 36, 37.

There remains the question why the Goidelic warrior women were described in Welsh as *gwiddonod*. It is unfortunate here that the etymology of that word eludes my search; but the texts leave no doubt that in them *gwiddon* was capable of bearing the signification of witch or sorceress. They do more, they associate the *Gwiddonod* with prophecy and prediction in a way which allows one to suppose that they were regarded as the authors of them. The room for doubt is narrowed by the way one of them recognized Peredur at his first encounter with them: the recognition was so unexpected as to take Peredur himself by surprise, which he betrayed in his question, 'Why, hag, knowest thou that I am Peredur?' The Witches have already been compared to Scáthach, the amazon in Britain who taught Cúchulainn feats of arms. Her dominion bordered on that of one whose queen, named Aiffe, was also a great sorceress; but with regard to Scáthach we are told explicitly that she was a *fáith*, that is to say a *vates* or prophetess. When therefore Cúchulainn had learnt all that she could teach him, at his departure she foretold in a poem—a very obscure one—the events of his life, including the exploits and hardships described in the *Táin Bó Cúalnge*, the great epic story of Irish literature. That she is represented doing by means of the process known to Irish magic as *Imbas Forosna*, to which recourse was also had by Fedelm, a prophetess consulted by Queen Maive when setting out on the *Táin*. Fedelm likewise had learnt her business of poet and prophet in Britain: in Ireland the *Imbas Forosna* was eventually forbidden by St. Patrick because it involved an offering to the gods of the pagans. In the light of the Irish parallel of Scáthach, one can hardly be wrong in treating the Witches of Gloucester as Goidelic sorceresses who were regarded as enjoying the gift of prophecy and prediction.[1]

[1] As to Scáthach see the Book of the Dun Cow, fo. 125[b], 126[a]; *Tochmarc Emire* (ed. K. Meyer), *Revue Celtique*, xi. 448, 449, 452, 453, 457; O'Curry's *Manners and Customs*, ii. 369–71. As to Fedelm see the Book of the Dun Cow, fo. 55[b]; D'Arbois de Jubainville, *Rev. Celt.*, xxviii. 155–9. For a description of *Imbas Forosna* and its abolition, see Cormac's Glossary, s. v. Imbas.

WHO WERE THE DORIANS?

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In my *Early Age of Greece*, vol. i, pp. 287 sqq., I argued that the lower part of the Balkan Peninsula, which we know as Greece, was inhabited from the Neolithic period by the same melanochrous race, which still forms by far the largest element in its population, that these people were the authors of the great civilization of the Bronze Age, commonly termed 'Mycenean', or by some 'Minoan'; I further urged that this people never spoke any other than an Indo-European tongue, and that it is their language which we find in the various dialects of both ancient and modern Greece; I further argued that a body of tall fair-haired immigrants had come into Greece from the Danubian and Alpine regions somewhere about 1500 B.C., and that these people, known to us as Achaeans, were part of the great fair-haired race of upper Europe termed by the ancients the Keltoi, and now commonly described as Teutonic. This people brought with them the use of iron, they burned their dead instead of burying them as did the aborigines, they had garments of a different kind, which they fastened with brooches, and they brought with them a peculiar form of ornament, which is commonly termed geometric or dipylon. I have also pointed out elsewhere that they differed essentially in their social institutions and religion from the Pelasgians, whom they conquered. There can be no doubt that the aboriginal race traced descent through females, as was certainly the case at Athens, in Arcadia and in ancient Argolis, which can be proved from the legends themselves.

On the other hand, the Homeric Achaeans are strictly monandrous, the fidelity of Penelope having become proverbial through the ages, whilst their wives expected similar constancy on the part of their husbands, as is shown by the story of the jealousy of the mother of Phoenix, and the part played by that hero in espousing his mother's cause against his father.

I likewise pointed out that all the Illyrio-Thracian tribes of the upper Balkan belonged to the same melanochrous race as that of Greece, speaking likewise an Indo-European language.[1] But those tribes had been conquered in many instances by Keltoi from the Alpine regions, or else driven out completely. Thus the Getae and Trausi were certainly not ethnologically Thracians, though so termed geographically, for they were the 'red Thracians', and we know from Herodotus that they differed essentially in all their customs from the indigenous Thracians whom they had conquered. Moreover, it appeared that the ruling families in most of the Thracian tribes were of this other stock, for they had gods different from those of their subjects. Such then is the ethnical condition of the Balkan Peninsula at the dawn of history.

The Achaeans remained masters of Thessaly until they were driven out or subdued by the Thessalians, an Illyrian tribe, who crossed the Pindus in 1124 B.C., whilst the Achaeans continued dominant in Argolis and Laconia until the Dorian invasion some twenty years later in 1104 B.C.

It was universally assumed, until the appearance of my *Early Age of Greece*, that it was to the Dorians we ought to ascribe the new form of ornament known as the geometric, to which I have just alluded. But I was able to show that it had already had a complete grip upon Peloponnesus before the Dorians had ever planted foot in that region.

It has been generally assumed by my reviewers that the Dorians are simply another wave of the same stock as the Achaeans, and they have taken for granted that I hold that view. This paper is an endeavour to make clear who the Dorians were, and to show that they are in no wise to be regarded as belonging to the same Keltic stock as the Achaeans. The facts, as I read them, point entirely in a different direction, and I hope to show that the Dorians, like the Thessali, were simply an Illyrian tribe. Space renders it impossible for me to develop at length all the arguments which can be marshalled to support this doctrine, and I will therefore simply try to show that the Dorians differed essentially from the Achaeans in (1) their social system and law of succession, (2) their physical characteristics, (3) method of wearing their hair, (4) shaving the upper lip, (5) burial of the dead, and (6) in their language, or rather dialect, whereas in all these respects they agree with the Illyrians.

[1] *Op. cit.*, vol. i, pp. 342 sqq.

According to Herodotus,[1] the first home of the Dorians was in Phthiotis. From thence they migrated (probably driven out by the Achaeans) under the mythical leadership of Dorus, son of Hellen, to the tract at the base of Ossa and Olympus, called Histiaeotis. Forced to retire from that region by the Cadmeans (who were almost certainly the Thracian tribe known as Phlegyans in Homer[2]) 'they settled under the name of Macedni in Pindus. Hence they once more removed and came to Dryopis, and from Dryopis, having entered the Peloponnesus in this way, they became known as Dorians.' Elsewhere Herodotus[3] speaks of the Lacedaemonians, Corinthians, Sicyonians, Epidaurians, Troezenians, and Hermionians as 'Dorians and Macednians', except those of Hermione, and as having emigrated last from Erineus, Pindus, and Dryopis. The Hermionians were Dryopians 'whom Heracles and the Malians had driven out of the land now called Dorus'. The region known as Doris or the Doric Tetrapolis in classical times was the district lying between Thessaly, Phocis, and Acarnania. But not all the Dorians of Histiaeotis had migrated to Pindus, for ancient tradition states that some of them had sought new homes in Crete, and it is those settlers who are mentioned in the only place where the Dorian name occurs in Homer, the famous lines in the Odyssey[4] which give that invaluable description of the ethnology of Crete.

Herodotus thus held that the Dorians were Macedni or Macedonian in stock. But as the aboriginal Macedonians were closely identified in speech, dress, and method of wearing their hair with the Illyrian tribes by the ancients themselves, this statement of Herodotus makes a prima facie case for regarding the Dorians as Illyrians.

The Dorians who invaded the Peloponnesus were under the leadership of the Heraclidae, who certainly regarded themselves as differing in race from their subjects. Thus, when Cleomenes,[5] the Spartan king, occupied Athens in 509 B.C., on his attempting to enter the temple of Athena on the Acropolis the priestess forbade him, on the ground that it was not lawful for a Dorian to do so. Thereupon the king replied, 'I am not a Dorian, but an Achaean.' Clearly then the Spartans themselves knew that there was a strong racial distinction between Dorians and Achaeans. I have pointed out that the Illyrian and Thracian tribes were in many cases under the chieftainship of men of the Keltic stock from the Danubian region,

[1] i. 56. [2] *Il.* xiii. 301. [3] viii. 43. [4] xix. 177.
[5] Herod. v. 72.

and as the Achaean kings had intermarried freely with the ancient royal houses of Peloponnesus to which Heracles belonged, e.g. Pelops, Atreus, Agamemnon and Menelaus, we are not surprised that the Heraclidae laid claim to Achaean descent, and that the royal family of Sparta in classical times called themselves Achaeans, and not Dorians.

Social System.—The Achaeans of Homer are represented as strictly monandrous. As might be naturally expected, in such social conditions there is no trace of anything but male descent amongst them. Each chief has succeeded his father and expects to be succeeded by his own son, as is clear in the case of Peleus and Achilles, Laertes, Odysseus, and Telemachus, Atreus, Agamemnon and Orestes. Thus the doctrine of paternal descent as well as of monandry is as strongly marked amongst them as it was amongst the Germanic tribes of a later period. In Homer we have certainly cases of descent through women, but they are found amongst the Trojans and the Lycians, who of course were not Achaeans, the Lycians continuing to be typical examples of descent reckoned through females down to late classical times.

It can be shown that all the melanochrous peoples of Europe at the dawn of history were addicted to polyandry, and had descent through women as a natural corollary of their loose social system. Such was the case amongst the dark-haired inhabitants of Britain [1] and Ireland [2], in Spain, in the Balearic Islands, amongst the Ligurians [3] of France and Italy, and amongst the Illyrian and Thracian tribes other than the Getae and the Trausi, who, as we saw, were really Kelts.

We learn from Herodotus [4] that the Illyrian tribe of the Veneti had the practice of selling the girls of each village by auction for wedlock, when the handsome girls were made to supply dowers to obtain husbands for their less comely companions. From this we may infer that the girls were allowed complete licence before marriage, and that a man had to buy the right of having one of them assigned to him for his exclusive use. This inference is com-

[1] Caesar, *B.G.* v. 14.

[2] Ridgeway, 'The Date of the first shaping of the Cuchulainn Saga,' p. 2 (*Proceedings of British Academy*, vol. ii); Strabo, 167. 19 (Didot).

[3] Ridgeway, 'Who were the Romans?' (*Proc. of British Academy*, vol. iii).

[4] i. 196.

pletely confirmed by the further statement of Herodotus[1] that the Thracians permitted the utmost licence to their girls before they were purchased for marriage. Moreover, the Illyrians seem to have had female chieftains, for it is significant that the most powerful Illyrian sovereign of whom we read was Teuta, the Illyrian queen who in 230 B.C. put to death the envoys of Rome.[2] Probably Aristotle had in his mind the Illyrians as well as the Thracians and Dorians, when he said that 'the warlike races, with the exception of the Kelts, were under the control of women'. The fact that the Illyrians had female monarchs in the third century B.C., combined with the statement that in the fifth century B.C. the Veneti held that all the girls of the community were common property, and with the fact that polyandry was universal amongst their closely connected Thracian tribes, leaves little doubt that polyandry also existed amongst them as it did amongst the Agathyrsi, who dwelt in what is now Transylvania, and who were closely akin to both Thracians and Illyrians. These men had even their wives in common 'in order that they might be all brothers and as members of one family might neither envy nor hate one another'. They had thus anticipated Plato's famous doctrine.[3]

The legendary history of the Illyrians corroborates this conclusion in a notable fashion. Although there was every temptation to furnish each Illyrian tribe with an eponymous hero, many of them had a heroine at the head of their pedigree. The sons of Illyrius were said to be Encheleus, Autarieus, Dardanus, Maidus, Taulantus, Perrhaebus, and his daughters were Partho, Daortho, Dasaro, and others from whom are sprung the Taulantii, the Perrhaebians, and the Enchelees, the Autarieis, the Dardanii, the Parthenii, the Dasaretii, and the Darsii.[4] It is noteworthy that the Perrhaebians, who were amongst the most ancient tribes of Thessaly, are regarded as Illyrian, whilst the names of the heroines all end in -ω, the regular termination in Doric female names, such as Gorgo, Lampito, &c.

Let us now turn to the Dorians of the classical period, and let us examine the legendary and historical evidence bearing on the relation of the sexes among the Dorian aristocracies of Laconia and Argolis.

[1] v. 6. [2] Pliny, *H.N.* xxiv. 24. [3] Herod. iv. 49, 100, 104.
[4] Appian, *Illyr.* 2.

Fortunately both Xenophon,[1] and Polybius,[2] have left us statements about the meaning of which there can be no doubt. According to the former, conjugal fidelity was practically unknown at Sparta; this he ascribed to the legislative enactments of Lycurgus, who directed all his attention to produce and rear a vigorous brood of citizens. The lawgiver is represented as regulating the age of marriage for the sexes, and as he saw that when old men had young wives they exercised a special surveillance over them, he ordered, on the contrary, that an old man should bring in some man pre-eminent in physique and courage, and should get him to procreate children for him. Again, if a man did not care to cohabit with his wife, but should desire a child, he ordered that in case his eye had lighted on a fine woman, who had borne fine children, he was to get her husband's permission and have children by her. Xenophon adds that 'the women are ready to be mistresses of two houses, and the men to give a share in their children to their brothers, who participate in the family and power but do not make any claim to the property'.

The obscure sentence which I have paraphrased by the words 'give a share in their children to their brothers' is rendered perfectly lucid by Polybius, who states that it was 'customary with the Lacedaemonians for three or four men, or sometimes more, if they were brothers, to have one wife, and it was esteemed right for a man in case he had begotten a sufficient number of sons, to hand over his wife to one of his friends'.

The specific statements of Xenophon and Polybius are fully borne out by the famous passage in which Aristotle[3] criticizes the Spartan constitution: 'Again the licence of the women at Lacedaemon is equally fatal to the spirit of the polity and to the happiness of the state. For as husband and wife are constituent elements of a household, it is right to regard a State also as divided nearly equally into the male and female population, and accordingly in

[1] *Rep. Lac.* i. 9: *αἵ τε γὰρ γυναῖκες διττοὺς οἴκους βούλονται κατέχειν, οἵ τε ἄνδρες ἀδελφοὺς τοῖς παισὶ προσλαμβάνειν, οἳ τοῦ μὲν γένους καὶ τῆς δυνάμεως κοινωνοῦσι τῶν δὲ χρημάτων οὐκ ἀντιποιοῦνται.*

[2] Mai, *Scriptorum Veterum Noua Collectio e Vaticanis codicibus edita*, Tom. ii, p. 384. *Παρὰ μὲν οὖν τοῖς Λακεδαιμονίοις καὶ πάτριον ἦν καὶ σύνηθες τρεῖς ἄνδρας ἔχειν γυναῖκα καὶ τέτταρας· τότε δὲ καὶ πλείους ἀδελφοὺς ὄντας, καὶ τέκνα τούτων εἶναι κοινά· καὶ γεννήσαντα παῖδας ἱκανούς, ἐκδοῦναι γυναῖκα τινὶ τῶν φίλων καλὸν καὶ σύνηθες* (Polybii *Excerpta*, lib. xiii, fragm. vi).

[3] Pol. ii. 9.

any polity where the condition of the women is unsatisfactory, one half of the State must be regarded as destitute of legislative regulations. And this is actually the case at Lacedaemon. For the legislator, in his desire to impart a character of hardness to the State as a whole, although true to his principle as regards the men, has been guilty of serious oversights in his treatment of the women, as their life is one of unrestrained and indiscriminate licence and luxury.'

We have thus irrefragable evidence of not only general polyandry but also of the more limited Tibetan form, wherein several brothers have the family property and one wife in common. Nor can it be urged that this phase of society had sprung up in Sparta at a comparatively recent date. For according to Aristotle Lycurgus 'made an effort to reduce the women into conformity with the laws, but they resisted so stoutly that he abandoned the attempt'. This is, of course, at variance with the statement of Xenophon, who ascribes to Lycurgus the great laxity of Spartan domestic life. Both stories, however, assume that polyandry had existed in Sparta from a very early stage of her history.

McLennan[1] cited that story which represents Lycurgus as declining, on purpose to set an example to his countrymen, to marry his brother's widow and cut out from the succession his brother's son, as indicating the transition from female to male succession in the royal Dorian house. Though this story cannot be regarded as proving McLennan's contention, yet we have no difficulty in finding an undoubted case of female descent in another great Dorian family. But if descent had once been reckoned through women, it is a sure evidence that laxity of sexual relations had once been the regular order of things.

Since the postnuptial unchastity of the Spartan women is so clearly proved, we have no reason to doubt that their prenuptial morality was as low as it is painted by Euripides in his *Andromache*.[2]

Nor is it only in Sparta that there is proof that polyandry and female kinship once existed among the Dorians. Corinth likewise supplies some evidence of importance. In that city kings had been superseded in the course of time by annual magistrates named Prytanes. These were chosen from the clan of the Bacchiadae, 'who intermarried only among themselves and held the management of affairs. Now it happened that Amphion, one of these, had

[1] *Studies in Ancient History*, p. 232.

[2] 559–95 sqq.

a daughter named Labda, who was lame, and whom therefore none of the Bacchiadae would consent to marry; so she was taken to wife by Aetion, son of Echecrates, a man of the Deme of Petra, who was, however, by descent of the race of the Lapithae, and of the house of Caeneus.'[1] Labda bore a son, whereupon the Bacchiadae sent ten of their number to destroy him, but his mother hid him in a chest (*kypsele*), whence he obtained the name of Cypselus. Unless the succession of the Bacchiadae had been through women there would have been no reason for their careful endogamy. On the contrary they would have been able to strengthen their power by giving their daughters in marriage to leading men among the other citizens.

Again at Argos and Epidaurus in addition to the three familiar Dorian tribes—Hylleis, Dymanes, and Pamphyli—there was a fourth named Hyrnathia, which may perhaps have been named after Hyrnetho, the daughter of Temenus, the first Dorian king of Argolis. 'This Hyrnetho was married to Deiphontes, whom Temenus had openly employed as his general in his battles instead of his own sons, and he took his advice in everything; and as he had previously made him his son-in-law and loved his daughter Hyrnetho best of all his children, he was suspected of trying to divert the kingdom to her and Deiphontes. Therefore his sons plotted against him, and Cisus, the eldest of them, mounted the throne'.[2]

Here we have apparently not only a tribe named after a woman, as amongst the Illyrians, but a clear indication of a time when female succession was the rule amongst the Dorians. Another legend indicates that the feeling of the nation was in favour of the daughter Hyrnetho and her husband, for we are told by Pausanias[3] that Deiphontes and the Argives took possession of Epidaurus. The latter had separated from the rest of the Argives after the death of Temenus, because Deiphontes and Hyrnetho hated the sons of Temenus, and their army was more attached to them than to Cisus and his brothers. Thus in both Argolis and Laconia there is no lack of evidence that the Dorians at the time of their conquest had still the rule of female kinship.

In face of this evidence it cannot any longer be maintained that the Homeric picture of society reflects the social life of the Dorians at any period of their history. The facts demonstrate that

[1] Herod. v. 92. [2] Paus. ii. 19, 1. ii. 26, 1. [3] ii. 26, 1.

the Dorian invaders of Peloponnesus were no less polyandrous than the aboriginal Pelasgian population of that area.

That two-fifths of the land in Laconia was in the hands of women, so much commented on by both ancient and modern writers, was probably due to the ancient custom of female succession, and an hereditary readiness on the part of the Dorians to leave their land to their daughters, even at a time when descent was now reckoned through males.

C. O. Müller[1] has pointed out that amongst the Thessalians, who, as we have seen, were certainly Illyrian in origin, the women, as amongst the Dorians, were addressed by the title of 'ladies' (δέσποιναι),—a form of address 'uncommon in Greece and expressive of the estimation in which they were held'.

Again, the same writer has pointed out that the love of the male sex (that usage peculiar to the Dorians) was also common amongst the Thessalians, and that the boy-favourites were called by the same name (ἀΐται) as at Sparta.[2] This similarity of nomenclature is very remarkable, and seems to point to a very close relationship between the Dorians and Illyrians.

Physical Characteristics.—The Achaeans of Homer were large men with fair hair. But it is almost beyond doubt that the Dorians were neither remarkably tall nor xanthochrous. For if such had been the case, as it was with the Thebans, both these points would certainly have been remarked in some of the various passages in classical authors which refer to them, especially in view of the frequent reference to Spartan women, their habits and their costume. Yet the Pseudo-Dicaearchus gives us a full account of the physical characteristics of the Thebans, and from his description it is reasonable to infer that the fair hair and tall stature of that people were quite exceptional in Greece, a statement hardly likely to have been made had the same features marked the Spartans.

There are several well-known passages in Greek authors, which afford every opportunity for reference to the colour of the hair of Spartan men and women, if there had been anything unusual or striking in it. For example, though Herodotus[3] relates how the Persian scout observed the Spartans combing their hair on the eve of the final struggle at Thermopylae, it is strange that with all his love of detail the historian should not have alluded to its colour

[1] *The Dorians*, vol. i, p. 3. [2] Ibid. [3] vii, 208.

if it had differed in shade from that of other Greeks. Again, in the *Lysistrata* of Aristophanes[1] there is every opportunity for allusion to the colour of the hair of Spartan ladies, had it differed in any way from that of the Athenians. For when Lampito, the Spartan lady delegate to the Peace Conference, arrives at Athens, though her Athenian hostess Lysistrata makes some very minute observations on her personal appearance, there is not the slightest reference to the colour of her hair. Now, as at that time it was the fashion at Athens, as we know from the same comedy,[2] for ladies to dye their hair yellow and to wear 'Cimbrian' garments in imitation of the Gallic women of the upper Balkan, Lysistrata would certainly have alluded to the fashionable colour of Lampito's hair, had she been blonde. Though the argument *e silentio* is often dangerous, yet when there are so many passages where reference to the colour of the Dorians' hair would have been made had it been unusual, we may conclude with very great probability that it in no wise differed from that of the ordinary melanochrous population of the Balkan peninsula.

Fashion of wearing the Hair.—It will be naturally said that the passage from Herodotus just cited proves that the Spartans wore their hair long just as did the long-haired (*κάρη κομόωντες*) Achaeans of Homer, and that accordingly in this respect they closely resemble the latter people. But it must not be assumed that because the Spartans in the fifth century B.C. wore their hair long, as did the Homeric Achaeans, they are thereby to be identified as belonging to the same ethnic group, for Herodotus[3] expressly tells us that the Spartans had only adopted the practice of wearing their hair long after the overthrow of the Argives in the struggle for Thyrea, having up to that time cut their hair. But whilst the Celts of the Danubian and Alpine regions wore their fair hair unshorn as did the Achaeans, on the other hand the Illyrian and Thracian tribes cut their hair.[4] Thus, then, the Dorians agree in complexion and custom of cutting the hair with the Illyrio-Thracian tribes which bordered on Thessaly.

[1] *Lys.* 78–83: ΛΥΣ. *οἷον τὸ κάλλος, γλυκυτάτη, σου φαίνεται.*
ὡς δ' εὐχροεῖς, ὡς δὲ σφριγᾷ τὸ σῶμά σου.
κἂν ταῦρον ἄγχοις. ΛΑΜ. *μάλα γ' οἷῶ ναὶ τὼ σιώ·*
γυμνάδδομαι γὰρ καὶ ποτὶ πυγὰν ἅλλομαι.
ΛΥΣ. *ὡς δὴ καλὸν τὸ χρῆμ' ἔχεις τῶν τιτθίων.*

[2] *Lys.* 43–5. [3] i. 82.

[4] Ridgeway, *Early Age of Greece*, vol. i, p. 344; cf. Theocr. xiv. 46.

Shaving the Upper Lip.—The Spartans shaved their upper lip, as we know from Aristotle,[1] whilst Plutarch[2] tells us that the ephors on coming into office enjoined on all men 'to shave the moustache' and to 'obey the laws'. On the other hand, the Achaeans of Homer seem not to have shaved the upper lip at all, whilst from the earliest date at which the Celts from the Danubian region come within our ken, they are especially distinguished by wearing the moustache, as is well exemplified in the famous statue of the Dying Gaul.

Disposal of the Dead.—I have elsewhere pointed out[3] that the Dorians did not burn their dead, as did the Homeric Achaeans, but inhumed them, as was the practice of the indigenous Illyrians and Thracians.[4] On the other hand, the Celto-Umbrian tribes of central Europe and upper Italy always cremated their dead, as did the Achaeans.

Plutarch[5] tells us that Lycurgus made excellent regulations for funerals. In the first place, in order to kill superstition, he raised no objection to burying the dead in the city and having their monuments near the temples, thus habituating the youths to such sights, that they might not be perturbed by or shrink from death as though it defiled those who touch a dead body or pass athwart graves. 'In the second place he forbade anything being buried along with the dead, but they used to bury the body wrapt in a purple cloak and olive leaves.' Elsewhere[6] Plutarch says that when an ordinary Spartan died in a foreign land it was the custom to celebrate his funeral rites there and leave his body behind, but the bodies of kings were brought home. Thus the Spartiates, who were with Agesilaus when he died far from home, melted wax all over the corpse, since honey failed them, and brought it back to Sparta. Nor can it be said that it was only the Dorians of Sparta who practised inhumation. The Megarians interred their dead, but they seemed to have laid the body to face east, though according to Heraeus of Megara the Megarians also buried the corpse to face the west, and moreover shared with Salamis the custom of laying three or four in one tomb. The double usage in orientation at Megara was probably

[1] *Fragm.* 496.
[2] *De Sera Num. Vind.* 550 (Reiske) μὴ τρέφειν μύστακα καὶ πείθεσθαι τοῖς νόμοις.
[3] *Early Age of Greece*, vol. i, pp. 490–1.
[4] Ibid. p. 495. [5] *Lyc.* 27. [6] *Ages.* 40.

due to the mixed aboriginal and Dorian population. As the dead lay towards the west in Attica, Salamis, in some cases at Megara, and in the majority of the interments in the Shaft graves at Mycenae, it may be inferred that this was the characteristic orientation of the autochthonous race.

The Sicyonians buried their dead 'in the ground', though of course these might be the aboriginal race, since they had been able to overpower their Dorian masters.

Dr. A. J. Evans[1] has lately found at Cnossus, 'about a mile to the north (of the Palace) on the way to the headland where a Royal tomb had already been excavated, a series of "Cyclopean" blocks' which proved to have been removed from their original context. Immediately below them were two beehive tombs cut out of the soft rock. In their form and certain features of their contents they represent 'the old Minoan tradition', but they belong 'to a period about 800 B. C., when the Dorian settlement of a large part of the island was already an accomplished fact. The swords here were of the mainland type, iron succeeding the earlier bronze, and cinerary urns had replaced the earlier corpse burial; but the variety and invention displayed in the objects found, the continuity of many of the decorative motives, as well as the appearance of the characteristic "stirrup vase", pointed to a distinct survival of the old indigenous element. In one tomb there were nearly a hundred vessels, and among them the more important cinerary urns presented quite a new and very elaborate style of Geometrical design.'

In view of the facts just cited above, Dr. Evans's idea that these cinerary urns are those of Dorians must be rejected. On the other hand they exactly fit the Homeric period, when the Achaeans, who preceded the Dorians on the mainland, always cremated their dead. Moreover, as the Odyssey represents the Achaeans in possession of Crete at the time of the Trojan war, whilst there was no large influx of Dorians from the mainland until long after they had conquered the Achaeans in Argolis and Laconia, the continuity of the older style of decoration as well as of the 'stirrup cup vases' can be much better explained, if the new tomb belonged to the Achaean lords of Cnossus, who had overthrown the Minoan dynasty.

Dialect.—There are certain labialized forms in Homer and in later Greek which I have compared[2] with the similar labialized

[1] *Times*, July 15, 1907.

[2] *Op. cit.*, 673–4.

forms in use amongst the Celts and their close kinsmen, the Umbrian-Sabellian peoples of Italy. For instance, πίσυρες for τέτταρες in Homer and the form ἵππος common to all the later Greek dialects, which had certainly replaced an older form ἴκκος, whose existence is proved by the ancient lexicographers. The best modern philologists are agreed that the form ἵππος has come into Greece, and I have compared its labialized form with the Gallic *Epona* (the horse-goddess) and the modern Welsh *eb* (horse). When the Achaeans were driven out of what was later known as Thessaly by the invading Illyrian tribe of Thessali nearly at the same time as the Dorian invasion of Peloponnesus some of them and their Achaeanized subjects settled in Boeotia. Doubtless it was to them, and possibly to the Phlegyans, who had previously captured Thebes and settled there, that Thebes owed her famous tall, fair-haired inhabitants. It is interesting to find in this very area some unmistakably labialized forms. Thus the Boeotians said πέτταρες instead of τέτταρες, they called a woman βανά, not γυνή, as did the Athenians and the Ionians, or γυνά, as did the Dorians. Again, the Boeotians called the locust πόρνοψ, as did also their kinsmen who had settled in the Aeolid in north-west Asia Minor, when others of their number had found new homes in Boeotia, while it is certain that the indigenous population of Greece, such as the people of Mount Oeta, used the unlabialized form κόρνοψ.[1]

The Boeotian form πέτταρες = the Gallic *petor* found in *petor*-ritum, 'a four-wheeler,' and the Umbrian *petur*, whilst βανά corresponds to the Irish *ban*, 'woman.' It is now clear that as the Dorians do not use any of the labialized forms peculiar to Boeotia and the Aeolid whither the Achaeans from Thessaly had migrated, they cannot have been part of the Achaean stock which had entered Greece centuries before the Dorian migration. On the other hand there is no evidence that the Illyrians had any tendency to labialism, for the scanty available data point rather to their being distinctly a *K* folk, as were their close neighbours the Ligurians, who formed the oldest stratum of population over a great part of Italy, just as the Illyrians did over a large part of the sister peninsula.

Though the Spartans thus differed essentially in their phonetics from the Achaeans of Homer and from the fair-haired folk who formed a leading factor in the population of a large part of Boeotia

[1] Strabo, 524, 28 (Didot).

in the classical period, they undoubtedly agreed with the Illyrians in at least one characteristic.

The Spartans, as is well known, used σ where all other Greeks used θ, e. g. σιός = θεός. Now the Macedonian name for Silenoi was Δανάδαι, whilst the Illyrian term for the same was Σενάδαι. Again, there was an Illyrian tribe, the next neighbour to the tribes of Macedonia proper, called Δασαρέτιοι who were also called Sesarethii (Σεσαρήθιοι).[1] The occurrence of the parallel forms *Dauadai* and *Seuadai* forbids any rash emendation of either form into the other, as well as the explicit statement of Strabo that there was a double form of the name. It is plain that *d* cannot come from *s* nor *s* from *d*, whilst it is equally certain that both can come from a common *DH*. For in Macedonian the medials regularly represent the original aspirates, e. g. Βίλιππος = φίλιππος, Βερένικος, Βερενίκη (Βερνίκη) = φερένικος, φερενίκη. Thus a common form θανάδας* would give Macedonian Δανάδας and Illyrian Σενάδας, and a common form θασαρήτιοι* would give both *Dasaretii* and *Sesarethii*, the former being almost certainly the form used by the Macedonians who bordered on this tribe, the latter by the Illyrians themselves.

Thus we have fully proved for Illyrian the assibilation of original *DH*, which characterizes Doric alone amongst the various Greek dialects. The fact that both Dorians and Illyrians had in common this feature not found in the dialects of their neighbours points unmistakably to their very close relationship.

We have already seen above that the names of the heroines from whom many Illyrian tribes traced their descent all end in -ω, which is also the regular termination of female names in Doric.

There are other pieces of evidence which cannot here be adduced owing to the conditions of space, but I venture to think that enough has been said to show that the Dorians differed essentially in race from the Achaeans of Homer, whilst they so closely resemble in their social habits, their physique, method of wearing the hair, in the disposal of their dead, and in their dialectic forms, the Illyrians, that they must be regarded, like the Thessali, as an Illyrian tribe.

[1] Strabo, 271, 23 (Didot).

ON THE ORIGIN OF THE CLASSIFICATORY SYSTEM OF RELATIONSHIPS

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Lewis Morgan is the only modern writer who has attempted to formulate a complete scheme of the evolution of the human family, a scheme based almost entirely on a study of the classificatory system of relationships of which he was the discoverer. According to this scheme human society has advanced from a state of complete promiscuity to one characterized by monogamy by a gradual evolution, the three chief stages of which Morgan called the consanguine, the Punaluan, and the monogamian families. In recent years the scheme has encountered much opposition, especially from Starcke,[1] Westermarck,[2] Crawley,[3] Andrew Lang,[4] and N. W. Thomas,[5] the last calling Morgan's whole structure a house of cards, and it may perhaps be said that the prevailing tendency in anthropology[6] is against any scheme which would derive human society from a state of promiscuity, whether complete or of that modified form to which the term group-marriage is usually applied.

The opponents of Morgan have made no attempt to distinguish between different parts of his scheme, but having shown that certain of its features are unsatisfactory, they have condemned the whole. The elaborate scheme of Morgan can be divided into two distinct parts, one dealing with the existence of the consanguine family and the evolution from this of the Punaluan family, while the other part deals with the existence of this latter form of the family itself. It will be my object in this paper to point out a radical defect in the first part of Morgan's scheme, and then to endeavour to restate the

[1] *The Primitive Family*, London, 1889.

[2] *History of Human Marriage*, 3rd ed., 1901.

[3] *The Mystic Rose*, London, 1902.

[4] *Social Origins*, London, 1903, p. 90.

[5] *Kinship Organisations and Group Marriage in Australia*, Cambridge, 1906.

[6] The chief exception among those who have written on this subject in recent years is Kohler; see *Zur Urgeschichte der Ehe*, Stuttgart, 1897.

second part of his scheme in accordance with the knowledge which has accumulated since his time.

The existence of both the consanguine and Punaluan families was deduced by Morgan from the characters of the classificatory system of relationships. This system is found throughout the whole of North America, and probably exists also in the South. It is universal throughout the Pacific—in Polynesia, Melanesia, New Guinea, and Australia. It is found in India, and some typical examples have been reported from Africa, over which continent it is probably very widely spread. Vestiges of it are found in other parts of the world, and it is probable that relationships have been expressed in this way by all the races of the world in the early stages of their development. The most important feature of the system is that large groups of people who, according to our ideas, are related in very different ways and in very different degrees are all ranged in the same category. The same name is given to a distant cousin once removed, for example, as is given to the father. On the other hand, relatives who are given the same name by most civilized people are in the classificatory system often rigorously distinguished. In this paper I propose to consider how far there is reason to believe that this system had its origin in the organization of early society, and especially in the early modes of relationship between men and women. In the first part of the paper I shall deal with the evidence provided by the system for the existence of Morgan's consanguine family, and in the second part shall consider the origin of the system in a condition of group-marriage.

The Nature of Morgan's Malayan System.

Morgan's belief in the existence of the consanguine family, which corresponds to what is often called the undivided commune, was based entirely on the view that the variety of the classificatory system which he called Malayan[1] was the earliest form of the system. If it can be shown that the Malayan form represents a late stage in the development of the system, the whole evidence for the consanguine family falls to the ground so far as it is provided by

[1] The actual examples on which Morgan based his Malayan system were from Polynesia, the name Malayan being chosen by him because he regarded the Polynesians as a branch of the Malayan family (*Ancient Society*, p. 403). In spite of much recent work on the Malays we are still almost wholly in the dark as to the kind of kinship system found among the different branches of that people.

the classificatory system, and Morgan himself acknowledged[1] that his hypothesis of the consanguine family rested principally, if not wholly, on this foundation.

Morgan supposed that the Polynesian societies which possessed the Malayan system were in a pristine state of culture, and he believed that their system of relationships revealed a corresponding primitive state of the evolution of the human family. We now know that Polynesian society is relatively highly developed, and it may perhaps be held to be superfluous to show that their kinship system, instead of being archaic as Morgan supposed, is a late product of change. I have been unable to find, however, that any student of the subject, whether supporter or opponent of Morgan, has refused to accept the Malayan form as primitive, and since the belief in its primitiveness is at the bottom of many of the difficulties in connexion with this subject, the evidence in favour of the lateness of the system may be given.

The special characteristic of the Malayan or Polynesian system is the small number of terms and the corresponding wide connotation of each. The same terms are used to denote relationships for which many different terms are found in most forms of the classificatory system; thus, excluding differences dependent on age and sex, all the relatives of a speaker of the same generation as himself are addressed by the same name. The distinctions between father's brother and mother's brother and between father's sister and mother's sister which are usual in the classificatory system are not present, and there is a corresponding absence of distinctive names for their children. Morgan supposed that we had in this system the survival of a state of society in which all the members of a group corresponding to the brothers and sisters of a later stage intermarried indiscriminately, the consanguine family which he advanced as the earliest stage of human society.

I hope to show that this wide connotation of relationship terms is late, and not primitive, by pointing out that elsewhere we find examples where classificatory systems are undergoing changes which are modifying them in the direction of the Hawaian form. My attention was directed to this problem by a study of the relationship systems of Torres Straits. We have in these islands two peoples in different conditions of social organization. In both there is patrilineal descent, with fairly definite evidence in one case at least that

[1] *Ancient Society*, pp. 385, 388, 402.

the people have emerged from a previous condition of mother-right, and the high degree of development of the idea of property would seem to indicate that their social condition is far from being of a primitive kind. On examining the social organization of the two communities we find additional evidence of their relatively advanced condition. The organization of the western islanders is totemic, probably in a relatively late stage, there being evidence of a previous dual organization which has become extinct. The social condition of the eastern islanders is probably still more advanced, having a territorial basis, with few traces of the conditions of mother-right and totemism from which they have nevertheless probably emerged. On studying the kinship system of these two peoples we find different stages of change in the direction of simplification. In the island of Mabuiag in the west the distinction between the children of father's brother and mother's brother is not present, and the name given to these relatives is also given to the children of father's sister and mother's sister. That the absence of the distinction is due to loss, and not to imperfect development, is rendered probable by the condition of the terms used for the older generation; here there are still distinct terms for father's brother, mother's brother, father's sister and mother's sister, but there are definite signs that these distinctions are becoming blurred, and that the people are on their way to giving the same name to the relationships of father's sister and mother's sister, and possibly even to those of father's brother and mother's brother. In the Murray Islands in the east, on the other hand, there is still present the distinction between the children of father's brother and mother's brother; but here the distinction between mother's sister and father's sister which seemed to be in process of disappearance in Mabuiag has completely gone. For the full evidence on these points I must refer to the articles on 'Kinship' in the fifth and sixth volumes of the Reports of the Cambridge Expedition to Torres Straits. I can only say that the evidence is strongly in favour of the wide connotation of certain kinship terms in Torres Straits being a product of late change. These changes would not have to go very much further to produce kinship systems approaching very closely to that of Hawaii, and thus a strong supposition is raised in favour of the Polynesian system being also a product of late change.

If we now turn to Australian systems we find that it is universal, so far as the evidence goes, to have distinctive names for the four

kinds of relative of the generation older than the speaker, viz. father and father's brother, mother's brother, father's sister, and mother and mother's sister. Similarly, in the next generation it seems to be almost universal, ignoring differences according to age, to have one designation for father's brother's children and mother's sister's children and another designation for mother's brother's children and father's sister's children.

The only exception with which I have met is very instructive from the point of view which I am considering in this paper. The exception is found in the case of the Kurnai. In this tribe, which differs from all other Australian tribes in its mode of social organization, there are separate designations for father's brother, father's sister, mother's brother and mother's sister, but in the next generation the corresponding distinctions are absent and the children of mother's brother and father's sister receive the same names as the children of father's brother and mother's sister.

In this respect the Kurnai system resembles that of the island of Mabuiag in Torres Straits while it retains the distinction between father's sister and mother's sister which has disappeared in Murray Island.

In one place [1] Howitt speaks of the Kurnai system as primitive, though two pages later he expresses doubts about this. The case seems to be very much like that of the Torres Straits people in that the social system of the Kurnai has a territorial basis with patrilineal descent, and few anthropologists would doubt that it represents a late stage in the evolution of Australian society. There can be equally little doubt that the special features of the kinship system of the Kurnai depend on loss of distinctions which once existed, rather than on a failure to develop distinctions found everywhere else in Australia.

If we accept the view that both the Kurnai and the people of Torres Straits show us late developments of social organization, we are confronted with the fact that in these relatively advanced societies we find variants of the classificatory system which bring them near to the Hawaian form, though in none of the three has the generalization reached the degree present in that form.

We now know that the people of Hawaii and other Polynesians are far more advanced in social culture than the inhabitants of either Torres Straits or Australia, and it seems an almost inevitable

[1] *Native Tribes of South-East Australia*, p. 168.

conclusion that the changes which have occurred in the less advanced peoples have in the more advanced peoples proceeded still further in the same direction, and have produced the system characterized by the extremely wide connotation of the relationship terms to which Morgan gave the name of Malayan.

If we now turn from these regions bordering on the Pacific Ocean to the islands of the Ocean itself we find evidence pointing, I think, in the same direction. We find that the relationship systems of Fiji and Tonga possess the distinctions between father's brother and mother's brother and between father's sister and mother's sister, and they also possess the distinction between the children of father's brother and mother's sister on the one hand and mother's brother and father's sister on the other hand. No one can have any doubt that the people of Fiji and Tonga are in a much more primitive stage of social evolution than the people of Hawaiis perhaps the most advanced of Polynesian societies, and though it is of course possible that the more developed society, so far as general culture is concerned, may have preserved a more pristine system of relationships, the association of highly developed general culture and a late form of relationship system is by far the more probable.

So far as I am aware, we have no accounts of the Hawaian system other than that recorded by Morgan, but an account of the allied Maori system has recently been recorded by Elsdon Best,[1] and I think that any one who compares this account with those of the Torres Straits or Fiji can have very little doubt that we have in the former a later stage of the Papuan or Melanesian system. It would seem that just as the Polynesian languages have arisen by simplification of those of the Melanesian family, so have the Polynesian kinship systems arisen by simplification of a variety resembling those found among Papuan and Melanesian peoples at the present time.

Lastly, let us go to Morgan's own people, the North American Indians. Among the systems recorded by Morgan himself we find some which approach the Malayan system. I will take only one example. An isolated band of the Iroquois, called the Two Mountain Iroquois, had a form of the classificatory system in which the father's brother was distinguished from the mother's brother (though the two names are singularly alike); but the distinction between father's sister and mother's sister was not present, nor was

[1] *Journ. Anthrop. Instit.*, 1902, vol. xxxii, p. 185.

any distinction made between the children of the father's brother, father's sister, mother's brother and mother's sister. Thus we have in the case of this Iroquois tribe a system which is rather nearer the Hawaian system than that of either Mabuiag or Murray Island, each taken alone. If the definite loss which the Mabuiag system has undergone were combined with the loss which the Murray Island system has suffered, we should have before us a system almost identical with that of the Two Mountain Iroquois.

The Two Mountain Iroquois were colonists from the Mohawks and Oneidas who had settled above Montreal, and if their system is to be regarded as primitive, we have to suppose that this small band, who had apparently separated from the main body at no distant date, had preserved a primitive form, while the main body showed the usual features of the classificatory system. The system of the Two Mountain Iroquois was collected by Morgan himself, and we may therefore expect it to be accurate, and it is surprising that Morgan should have allowed this peculiar system to pass almost without notice, for more attention to it might have led him to revise his opinion that the Malayan form represents an early stage in the evolution of the classificatory system, and with the disappearance of the Malayan system as a primitive mode of expressing relationships would also have disappeared his sole evidence for the existence of the consanguine family.

The Origin of the Classificatory System in Group-marriage.

In the first part of this paper I have dealt with Morgan's evidence for the existence of the consanguine family, and I have shown that so far as the classificatory system of relationships is concerned we have no evidence for this form of the family. As I am not here concerned with the general problem of the existence or non-existence of this form of the family but only with the evidence for it derived from the classificatory system, I can pass on to the second part of Morgan's scheme, again premising that I have only to deal with the existence of the Punaluan family so far as the evidence for it is derived from the nature of the classificatory system.

By the Punaluan family Morgan meant a form of the family characterized by the existence of group-marriage, to use his own words, ' founded upon the intermarriage of several sisters, own and

collateral, with each other's husbands, in a group,' and 'on the intermarriage of several brothers, own and collateral, with each other's wives, in a group'. In each case he supposed that the spouses on one side need not necessarily be of kin to one another.

As Mr. Thomas has shown, the expression group-marriage has been used very loosely by recent writers, and it will perhaps conduce to clearness if we adopt Mr. Thomas's definition, though it does not correspond exactly with that of Morgan's. When I use the expression 'group-marriage', I shall therefore mean a marriage occurring in a community divided into definite groups, whether they be clans, classes, phratries, in which all the men of one group are the husbands of all the women of the other group, and all the women of the first group are the wives of the men of the second group. According to this definition all the husbands or wives would be related as members of the same group, and it is in this respect that the definition may differ from that of Morgan.

The arguments for the existence of group-marriage derived from the classificatory system are briefly as follows. Often, but not by any means in all forms of the system, a man of one group will apply the same term to all the women of another group of a certain generation which he applies to his wife, and conversely all the women of one group may apply the same term to all the men of another group and of their own generation which they apply to their own individual husbands, and it has been argued that these terms are survivals of a state of society in which there were actual marital relations between those who used the terms. Secondly, a child of one group will give the same term to all the men of his father's group and generation which he applies to his own father, i. e. to all those who under the last heading would in some systems be called husbands by his mother, and it is supposed that this wide use of the term 'father' is similarly a survival of a state of society in which all the men of a certain standing in the opposite group were his potential fathers. To this argument the objection is made that the child in all forms of the classificatory system gives the same name to the women of his own group and of the same generation as his mother as he gives to his own mother.

This objection to the value of the classificatory system as a test of previous social conditions was recognised by Darwin in his reference to the views of Morgan in *The Descent of Man.*[1] He

[1] 1871, vol. ii, p. 359.

remarks 'that it seems almost incredible that the relationship of the child to its mother should ever be completely ignored, especially as the women in most savage tribes nurse their infants for a long time'. The objection still continues to influence many in their attitude towards the classificatory system, and the most recent writer on the subject, Mr. N. W. Thomas, has regarded the objection as a *reductio ad absurdum* of the hypothesis of group-marriage, and has jocularly commended such a belief in group-motherhood to the notice of zoologists.

Two quite different answers to the objection are possible. It may be that there was once a definite term for the individual relation between mother and child, and that the term became extended at a later stage of evolution so as to fall into line with other kinship terms. That such an extension of meaning can have taken place is summarily dismissed by Mr. Thomas as involving a process for which we have no evidence and for which no reason can be seen. As a matter of fact, however, as will be apparent from what I have said in the first part of this paper, people in low states of culture do extend the meaning of their kinship terms. Relatives once distinguished may come to receive the same appellation, and I see no reason to doubt that this process of generalization may have contributed to extend the connotation of the term 'mother'. The other answer, however, probably presents more nearly the genesis of that generalized relationship which we have to translate by that of mother and child. In such a state of society as that we must assume when the system of relationships was in process of development, it is not probable that the special relationship between mother and child would have persisted beyond the time of weaning. Let us assume that the weaning did not take place till the child was three years old [2] and the separation would have occurred before the age at which the child began to learn the terms of relationship to any great extent. It is even possible that in this early stage of culture the duty of suckling may have been shared by other women of the group, and that, at the time of weaning, the child might not have been in the position to differentiate between its own mother and the other child-bearing women of the group.

[1] *Op. cit.*, p. 123.

[2] I have assumed that weaning took place at this late age, because this now happens among many races of low culture, but if it was earlier, my argument is only strengthened.

To those unacquainted with society in low stages of culture it may seem very strange that a child should grow up without being able to distinguish his own mother from other women of his community. We know, however, that in relatively advanced societies with paternal descent, as in the Murray Islands, a man may grow up without knowing his real father and mother. In this case we have to do with adoption, and the case is therefore not parallel, but the occurrence of such ignorance in a relatively highly-developed community may help us to understand the absence of the knowledge of the personality of the mother at the much lower stages of social evolution which we have to assume at the time of origin of the classificatory system.

Again, the subject of adoption, which I have just mentioned, may throw some light on the matter. The people of the Murray Islands carry the custom of adoption to what seems to us an absurd extreme, and children are transferred from family to family in a way for which the people can give no adequate reason, nor can any adequate reason be found in the other features of the social or religious institutions of the people. I do not wish to go so far as to suggest that this custom of adoption may be a survival of a state of society in which children were largely common to the women of the group so far as nurture was concerned; but this is possible, and in any case this wholesale adoption may help the civilized person to understand that people of low culture may have different ideas in connexion with parentage from those prevalent among ourselves, and that the idea of group-motherhood is not as absurd as Mr. Thomas supposes.

Only one other relationship term raises any serious difficulty, viz. the application of the same terms to all the children of the group which are applied to own brothers and sisters, but if my line of argument is accepted to explain 'group-motherhood', the existence of group-brotherhood and sisterhood will present no difficulty.

The point which I have considered is the most definitely formulated objection which has been brought against the value of the classificatory system as evidence in favour of group-marriage. The older objections[1] were based on the idea that the system is only a table of terms of address, a view which by no means removes the necessity for a theory of its origin. The tendency of more recent

[1] McLennan, *Studies in Ancient History*, 1876, p. 366. See also Westermarck, *op. cit.*, p. 89.

objectors has been to show that the terms of the system are expressive of status and duties and not of consanguinity or affinity.[1] I shall return to this point later and will only say now that the view that the classificatory system had its origin in group-marriage implies that it was in its origin expressive of status rather than of consanguinity and affinity.

Merely to reply to objections raised by others is, however, hardly satisfying. In the earlier part of my paper I have shown that we have reason to modify Morgan's scheme in a very fundamental respect, and it is now evidently necessary to restate the mode of the hypothetical origin of the classificatory system in a condition of group-marriage. Such a statement must be so highly problematical and must involve so many doubtful features that I am very loath to undertake the task. I only do so because I believe it may assist clearness in the discussion of the problem if some definitely outlined scheme has been formulated which may make clear the points on which further evidence is required. My aim will be to suggest a state of society which would be capable of explaining the origin of the classificatory system of relationships and at the same time is not in obvious conflict with what we know of man in low states of culture.

I shall have to begin by making certain assumptions. First, I assume that at the time the classificatory system had its origin, the custom of exogamy was already in existence, and further I assume, for the sake of simplicity, though it is not essential to my argument, that the community possesses only two exogamous sections, which I will call moieties. We now have so much evidence of such a dual division of early society that there are few who will object to this assumption, though my argument would apply equally well if there were more than two exogamous divisions of the community.

Further, I assume, again for convenience' sake, that the child belongs to the division or moiety of its mother. This mode of counting descent is again so widespread in communities of low culture that few will quarrel with this assumption. In the hypothetical community I assume we have therefore two moieties united in group-marriage, all the active men of one group being the husbands of all the child-bearing women of the other group. In each moiety four groups of people would be roughly distinguished; the active men,

[1] Lang, *Social Origins*, p. 102; N. W. Thomas, *op. cit.*, p. 123.

the child-bearing women, the elders and the children. The distinctions between these groups will be fairly clear except in one case. All that we know of savage society would lead us to expect that there would be a sharp distinction between the group of children and their seniors. The widespread ceremonies of initiation point to a time when there was a complete change of status at this period of life, and I assume that the change takes place at a definite time, i.e. that a boy does not become a man gradually as with us, but suddenly at the period of initiation. The distinction between child-bearing and older women would also present no difficulties, and the chief trouble in imagining the state of society I suggest arises in connexion with the distinction between the active men and the elders. If I may be allowed to pass over this difficulty for the present, we should find in such a society that a child would recognize in his community people who stand to him in eight different relations. In his own moiety there would be the group of child-bearing women to whom he would give a name which was the origin of that we now translate 'mother'. Secondly, there would be the active men of his own moiety to whom he would give a name which later came to denote a relationship which we translate 'mother's brother'. Thirdly, there would be the group of children to whom names would be given which later came to mean 'brother' and 'sister'. Lastly, there would be the group of elders whose names would have been the origin of the terms translated 'grandfather' and 'grandmother'. In the other moiety there would be four corresponding groups; men to whom the child would give the name which we now translate 'father'; the group whom he would call by the name which came to mean 'father's sister'; the children of the moiety to whom he would give a name which later came to denote the children of the mother's brother and father's sister; and lastly there would be the group of elders who would probably receive the same names as the elders of his own moiety.

Such a state of society would give us the chief terms which we find in the classificatory system, and new terms would be developed as the social organization became more complex.

In such a state of society I suppose that the status of a child would change when he becomes an adult, and that with this change of status there would be associated a change in the relationship in which he would stand to the members of the different groups. The great difficulty in the acceptance of my scheme is to see how the

relationships set up by these age-groups developed into those regulated by generations such as we find among most people of low culture at the present time.

I cannot here attempt to follow out such a development in any detail, but I think it is possible to see the general lines on which one almost universal feature of the classificatory system may have evolved, viz. the distinction between elder and younger, especially frequent in the case of brothers and sisters. A man would probably tend to distinguish with some definiteness those who became adults earlier than himself from those who came later to this rank; he would tend to distinguish sharply between those who helped in his initiatory ceremonies and those to whom he was himself one of the initiators, and this distinction between seniors and juniors would probably be carried over into the system of relationships which gradually developed as the group-relations developed into more individual relations between men and women, and as the society became organized into generations in the place of status- or age-groups.

There still exist in various parts of the world societies possessing age-grades,[1] which may well be survivals of some such condition of social organization as that I suppose to have been the origin of the classificatory system. We have at present no evidence to show what relation there may be between these age-grades and the systems of relationships, but it is to be hoped that future investigation into the system of relationships of some community possessing age-grades may furnish material for the elucidation of the process by which the evolution from age-groups to generations has taken place.

What I suppose to have happened is that there were at first purely group-relationships which received names; that from these named relationships the people were led to formulate certain further distinctions which reacted on the group-relationships and assisted in their conversion into relationships such as we find to characterize the classificatory system at the present time.

If I am right in the main lines of the sketch I have just given, the classificatory system was in its origin expressive entirely of

[1] For a full account of these age-grades, see Schurtz, *Altersklassen und Männerbünde*, Berlin, 1902. Unfortunately, Schurtz complicates the problem connected with age-grades by including in this type of social organization the Australian matrimonial classes which have probably had an origin very different from that of true age-grades elsewhere.

status. The terms would stand for certain relations within the group to which only the vaguest ideas of consanguinity need have been attached. Several recent writers have urged that the classificatory system as we find it to-day is expressive of status only, and they have regarded this as a conclusive objection to Morgan's views. In the attacks made on Morgan's scheme during his lifetime the objections raised were of a different kind, being directed to show that the system was merely a collection of terms of address and had nothing to do with status and duties so far as status implied any function in the social economy. If Morgan were now alive I believe he would agree to a very great extent with those who regard the systems as expressions of status and duties so far as their origin is concerned, though his unfortunate error about the nature of the Malayan system prevented him from seeing to how great an extent the terms arose out of purely status relationships. It may be objected that he called the classificatory system one of consanguinity and affinity, but he called it this because, whatever may have been its origin, there is not the slightest doubt that at the present time the system is an expression of consanguinity and affinity to those who use it. I have now investigated the classificatory system in three communities,[1] and in all three it is perfectly clear that distinct ideas of consanguinity and affinity[2] are associated with the terms. The correct use of the terms was over and over again justified by reference to actual blood or marriage ties traceable in the genealogical records preserved by the people, though in other cases in which the terms were used they denoted merely membership of the same social group and could not be justified by distinct ties of blood or marriage relationship. There is in these three peoples definite evidence of the double nature of the classificatory system as an expression of status and of consanguinity, and there are definite indications of a mode of evolution of the systems by which they are coming to express status less and ties of consanguinity and affinity more.

The evidence relating to the classificatory system brought forward by most of the recent critics of Morgan has been derived chiefly from the Australians, and, so far as our existing evidence goes, it would seem that the status aspect of their systems is more prominent than

[1] Mabuiag and Murray Islands in Torres Straits, and the Todas in India.

[2] By consanguinity I mean blood relationship; by affinity, marriage relationship.

in other parts of the world, as would be expected from the very special development of matrimonial classes among them; but even in Australia it is probable that the aspect of the systems as expressions of consanguinity and affinity is far more important than the published accounts lead one to believe. The true relation between the classificatory system and the actual ties of blood and marriage relationship can only be properly brought out by a full application of the genealogical method, and this method has not yet been applied in Australia.

That there is sometimes a definite connexion between marriage regulations and the classificatory terms of relationship there can be no doubt. Thus I have shown elsewhere[1] that the terms used by Dravidian peoples provide definite indications of the marriage of cousins, which is a feature of their society; and similarly there is an evident relation between the classificatory terms and forms of marriage among the North American Indians.[2] When we find special features of the classificatory system to have had their origin in special forms of marriage, it becomes the more probable that its general features are the survivals of some general form of marriage.

My object in this paper has been to support the view that the features of the classificatory system of relationship as we find them at the present time have arisen out of a state of group-marriage, while pointing out that this system lends no support to the view that the state of group-marriage was preceded by one of wholly unregulated promiscuity. I should like again to insist that it has not been my object to consider here the problems involved in the growth of the human family in general, but only to deal with the evidence provided by the classificatory system of relationships.

The classificatory system in one form or another is spread so widely over the world as to make it probable that it has had its origin in some universal, or almost universal, stage of social development, and I have attempted to indicate that the kind of society which most readily accounts for its chief features is one characterized by a form of marriage in which definite groups of men are the husbands of definite groups of women.

[1] *Journ. Roy. Asiat. Soc.*, 1907, p. 611.
[2] See Kohler, *op. cit.*, p. 82.

ON PREHISTORIC OBJECTS IN BRITISH NEW GUINEA

By C. G. SELIGMANN, M.D., and T. A. JOYCE, M.A.

Within the last few years discoveries have been made in British New Guinea of pottery fragments and implements of obsidian and stone, which differ entirely in type from the pottery and implements used at the present time by the inhabitants of the localities in which the finds were made.

The majority of these objects have been brought to light in the course of prospecting or mining operations; some have been found a considerable number of feet below the surface; others have been picked up on the surface of the ground or brought in by natives, who could, however, give no information concerning them. Thus the objects discovered are all truly prehistoric in the sense that in each find objects occur concerning the origin and use of which nothing is known by the inhabitants of British New Guinea at the present time; there is, however, in no case reason to attribute any great age to the specimens found.

The discoveries mentioned fall naturally into four classes, viz.:

(i) Obsidian implements,
(ii) Stone implements,
(iii) Engraved shells,
(iv) Pottery.

The majority of the discoveries have been made on or near the northern coast, between the Mamba river and Collingwood Bay, but single obsidian objects have been obtained from Misima in the Louisiade archipelago, from Goodenough Island and from Murua; while a peculiar type of prehistoric pottery is found on the small island of Dauko, off the south coast of the Possession and about

four miles from Port Moresby. The sites of discoveries are marked with a + on the accompanying map (fig. 1).



Fig. 1.

Obsidian Implements.

Before describing the unusual obsidian implements which form the first class of prehistoric objects, it is necessary to consider briefly the occurrence of obsidian in the villages of south-eastern British New Guinea at the present day. Small fragments are found mixed with the shingle on which are built the coastal villages of Bartle Bay, an indentation in the large hollow of the coast which faces the D'Entrecasteaux group and constitutes Goodenough Bay. These fragments were until recently used for scarification for medical purposes, and the blocks from which they were struck were stated to have been brought from Goodenough Island for this purpose; but it was said that no larger fragments were in existence, that implements were never made of obsidian, and that no one had ever heard or thought of applying it to any use of this kind. At Wagawaga, in Milne Bay, fragments of obsidian, formerly used for bleeding and scarification, though less abundant, were not uncommon, and here they were said to have been obtained from a place called

Hiliwau, described as near East Cape, where, according to a somewhat doubtful statement, obsidian boulders were found in the jungle. One of us (C. G. S.) was shown a lump of obsidian about as big as an orange from which small masses had evidently been struck, and also a rather large piece of a volcanic glass, of a brownish red colour, said to have been brought from the same locality. But, again, it was denied that implements of obsidian had ever been made either at Wagawaga or elsewhere, and the same was said at Tubetube in the Engineer Group, where the fragments of obsidian used for medical scarification were formerly imported from Duau, the largest island of the D'Entrecasteaux group.

The localities mentioned were those in which a considerable amount of work was done by the members of the Daniels Ethnographical Expedition, but a flake of a brownish volcanic lava, suggesting a pitchstone rather than obsidian, was found on Gawa, one of the coral islands of the Marshal Bennet group, and the piece of worked obsidian shown in pl. ix, fig. 5 was picked up on Murua. Practically, then, fragments of obsidian have been found wherever search has been made in the south-eastern portion of British New Guinea and its archipelagos, but nowhere, as far as our present knowledge extends, is there any legend or trace of a belief that it was ever worked to form such implements as are shown in pl. viii, figs. 1, 2, 6, and 7.[1]

The most striking of the prehistoric obsidian objects is the beautifully finished axe or adze shown in pl. viii, fig. 2, and now in the possession of Mr. David Ballantine, who added the modern hafting.[2] The dimensions are as follows:—greatest length from cutting edge to end of tang, 183 mm., greatest breadth, 215 mm. It was found in a creek in the Yodda valley, below the surface of the ground, together with the stone pestle and mortar described below (p. 329).

[1] Dr. Rudolph Pöch, who has spent some time studying the Korafi of Collingwood Bay, informs us that he found many fragments of obsidian at Rainu, where he dug into one of the mounds which had not previously been disturbed. Dr. Pöch also states that he found no implements of obsidian in use among the folk of Collingwood Bay and the Cape Nelson Peninsula, although obsidian cores, from which small fragments were struck when required for shaving or scarification, are in common use.

[2] We take this opportunity of thanking Mr. Ballantine for permission to publish the photographs of implements in his collection shown in pl. viii, figs. 1 and 2; further, the flake shown in pl. viii, figs. 6 and 7, placed in the British Museum by one of us, was obtained through him.

This adze-blade is made from a single large flake, and is roughly lozenge-shaped with a rounded cutting edge; on the shaft side, as hafted, it has been worked to form a short tang.

The flake, of which two views are shown in pl. viii, figs. 6 and 7, was obtained on Goodenough Island, where it was brought for trade. It had been insecurely, and quite recently, lashed to the ends of two of the long thin spears typical of the D'Entrecasteaux group. On one face there is a median ridge, in part double; on the other face there is a distinct bulb of percussion at the end remote from the point. Length 113 mm. (British Museum, No. 1906. 10–14. 9).

The spear head illustrated in pl. viii, fig. 1, length 135 mm., was found by a miner, when sinking a shaft on Misima, at a depth of 4 metres below the surface. It is formed of a single flake triangular in outline, one end worked to form a broad short tang. One face has a double ridge, the other is plain. The small stone adze-blade mentioned below (p. 329) was found in the same shaft some 5 metres lower.

The last specimen of obsidian is shown in pl. ix, fig. 5; it is a small flake picked up by one of us (C. G. S.) on Murua at or below high-water mark in Wanai Bay. On the same site was found a considerable number of well-weathered chips and flakes of typical Suloga adze-stone.[1] This flake is roughly quadrangular, and has a dull surface. One face is plain with a well-marked bulb of percussion, the other is flaked. L. 26 mm. (B. M. 1906. 10–13. 33).

Stone Implements.

The two most interesting of the stone implements are the pestle and mortar shown in pl. ix, fig. 7, which were found in the Yodda valley, in the same creek as the obsidian axe already mentioned.

Mr. C. A. W. Monckton, the Resident Magistrate of the north-east district, mentions the discovery of these in the following terms: 'A remarkable pestle and mortar . . . have been found by some miners in gold workings at a depth of 12 feet below the surface in the Yodda valley. The mortar, which with the pestle weighed 66 lb., was roughly ornamented with barbaric carving . . . the

[1] Suloga is the name of the site whence was obtained the stone which, in the form of adze-blades, passes in trade for many miles on both the northern and southern coasts of the Possession. In fact, on the southern coast Suloga blades have reached at least as far as the Papuan Gulf.

pestle and mortar were discovered in the same creek as an obsidian battle-axe given by me some years ago to the Hon. David Ballantine, and both would appear to be relics of a forgotten race. No native to whom the recently found articles were shown could make any suggestion as to their original use or purpose, and all agreed that they were not the work of any now existing tribes.'[1]

The mortar has been cut from pale and rather soft stone; it is oval and measures 445 × 385 mm.; the bowl-shaped depression measures 295 × 285 mm. and is 60 mm. deep at the centre; round the depression runs a low ridge, which again is surrounded by fourteen large irregular knobs fringing the edge of the mortar. The pestle, which is cut from hard greyish stone, is 165 mm. long, and resembles a slightly elongated pear.

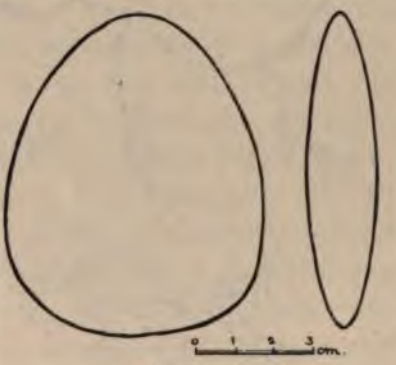


Fig. 2.

Several similar pestles, one of them a quite remarkable piece of carving in stone, have been found in this neighbourhood.[2]

A highly patinated adze-blade, of which the outline is shown in fig. 2, was found by a miner in the same shaft as the obsidian spear head described above, some 9 metres below the surface.

The remaining stone prehistoric objects come from Rainu in Collingwood Bay which, as Mr. Monckton says, is evidently 'an old village site of a forgotten people'. Here, too, were obtained frag-

[1] *British New Guinea Annual Report*, 1903–4, Appendix D, p. 31. Mr. Monckton figures the mortar and pestle which owing to his wise generosity are now in the British Museum (B. M. 1904. 11–23. 1), but the reproduction is unfortunately by no means a good one.

[2] Since this was written Mr. C. W. de Vis has published the description of a stone pestle found on Murua under three feet of gravel at the bottom of an extinct river bed from which were obtained 'the fossil bones of dugong, turtle, and crocodile'. The pestle is made 'of diabase or diorite, the rock which . . . is the prevailing geological feature of the island'. In shape it is described as resembling 'a short hyacinth glass, with a bulb of the plant in its usual position. Its base is, as it should be, gently and regularly convex; its conical body suddenly dilated above into a thick collar . . . an obtusely conical knob surmounting the collar, testifies to an impulse of the artistic faculty. . . . Its dimensions are these:— Total height, 169 mm.; diameter at base, 88 mm.; at neck, 43 mm.; of collar, 54 mm.' (*Annals of the Queensland Museum*, No. lvii, 1907, p. 12.)

ments of pottery—shown in plates x to xiii—entirely unlike those in use in any part of British New Guinea as far as it is known at the present day, together with carved shells of the genus *Conus*, pl. viii, figs. 3, 4, and 5, and at least one much weathered conus armshell carved in the same style (fig. 4). The most abundant stone implements found at Rainu are adze-blades of greenish ophicalcite, adzes of which were, until a few years ago, in use over a considerable area on the northern coast of the Possession. With

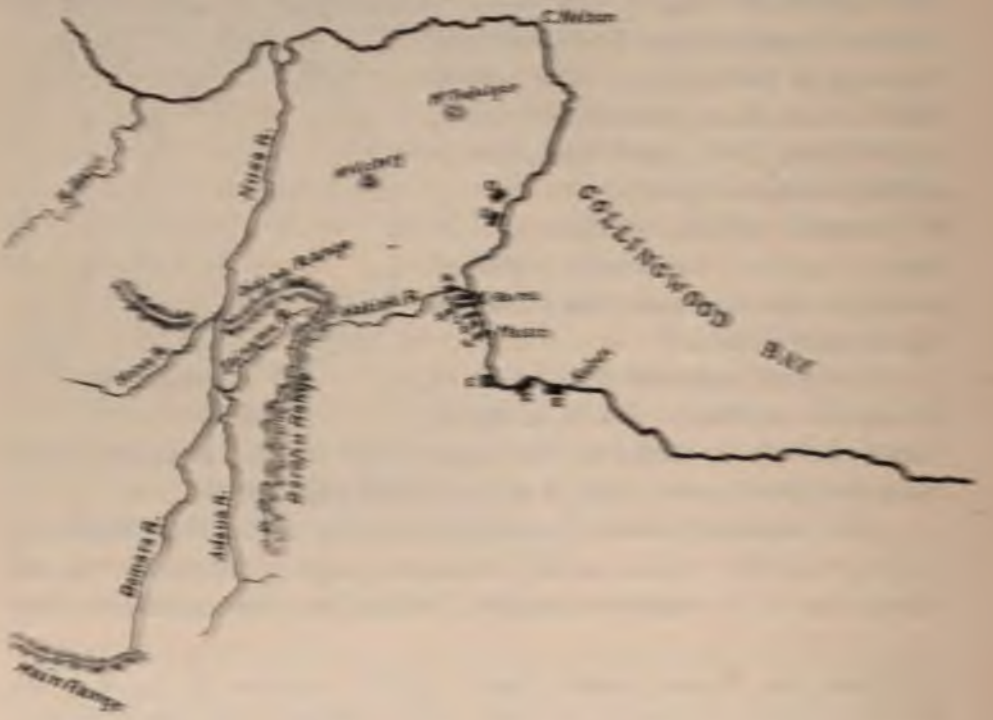


Fig. 3.

these finds of pottery, adze-heads and carved shells, were mingled the bones of pigs and human remains, but the latter were said to be in so fragile a condition that the bones fell to pieces on being handled.

The position of Rainu is shown in the sketch-map which forms fig. 3. Here the new Kubiri and Oiau settlements, in preparation for which the site was cleared, are now established. Without entering into the question of the distribution of the tribes in this neighbourhood, it may be pointed out that here, near Cape Nelson, the true or Western Papuan Binandere-speaking tribes meet the

smaller lighter immigrant Papuo-Melanesians, who have pushed up the coast from the east.

A stone fragment (B. M. 1905. 2–9. 342) of peculiar form was found here; the material appears to be a coarse-grained not very hard sandstone; from the fact that it is curved it appears to be the centre of the base of a vessel. On the exterior is a short cylindrical projection, possibly a foot. The interior is smooth and appears to have been much worn by friction. L. 160 mm. It seems not unreasonable to conclude that this is a part of a mortar similar to that already described.

The adze-blades found on the Rainu site are of the stone ophicalcite,[1] which is quarried (probably by the Doriri) somewhere on the northern aspect of the Goropu range, and traded down the Wakioki River to the Maisin, and down the Musa river to the more northerly tribes of Cape Nelson. But the four blades that we have examined, including those now in the British Museum, are all smaller and less heavy stones than those in present use, of which we have handled a considerable number.[2] Pl. ix, figs. 1 and 2, shows two of the ophicalcite adze-blades from the Rainu excavations; one of them is thin and flat; its outline is an irregular oblong; one end is ground on both sides to form an edge. Length 120 mm. The other is thicker, roughly triangular in outline; both sides are polished and bevelled to form a cutting edge at the base of the triangle. Length 50 mm.

A fragment of a discoid clubhead (B. M. 1905. 2–9. 327), cut from what is probably the same stone, though darker and harder, was also found in the excavations. It shows a portion of the usual biconical central perforation.

[1] We are indebted to Dr. J. E. Marr for kindly identifying the stone from which these adzes are made.

[2] We take this opportunity of gratefully acknowledging the assistance we have received from Mr. G. O. Manning, the Resident of the North Eastern Division in which Collingwood Bay is situated. Not only has he answered many questions and traced the distribution of ophicalcite adze-blades on the northern coast, but he has sent to this country a carefully labelled series of adzes collected between Collingwood Bay and the northern boundary of his division in the neighbourhood of Cape Endidadere. The best of these adze blades are now in the British Museum, where they constitute numbers 1906. 10–14. 3, 4, 5, 6, 7, and 8. The numbers of the prehistoric ophicalcite adze-blades from Rainu in the national collection are 1906. 10–14. 2 and 3 and 1905. 2–9. 329.

Engraved Shells.

Five specimens of these are known to us. One is the armlet cut from a *Conus* shell already mentioned; another is an entire conus shell; the remaining three have the flat spire removed, and one of these has the interior removed also.

The armlet shown in fig. 4 is annular, formed of a cross-section near the base of the cone. The exterior, now much weathered, has been ornamented with engraved concentric arcs and diagonals. Diameter 60 mm., depth of ring 10 mm.



Fig. 4.

Pl. viii, fig. 5, represents the complete conus shell, brownish in colour and ornamented with irregular lozenge patterns arranged in panels (B. M. 1905. 2–9. 336).

Figures 3 and 4 of pl. viii are shells with the spire removed, ornamented with bands of incised continuous scroll patterns. In the specimen shown in fig. 4 (B. M. 1905. 2–9. 337) the interspaces are filled with a sort of hatched leaf pattern; in that illustrated in fig. 3 (B. M. 1905. 2–9. 338) the bands of ornament appear to centre round a conventional human face which is extremely suggestive of the art of the Elema tribes of the Papuan Gulf.

The remaining specimen (not figured) of which the spire, columella, and, indeed, the greater part of its ventral surface have been removed, is ornamented with continuous scrolls similar to those on the two last specimens described.

These engraved shells are perhaps the most puzzling of the prehistoric objects that have so far been found in British New Guinea. Not only is engraving on shells not practised elsewhere in the Possession, but that portion of the cone shell which remains when its spire has been removed to be rubbed down to form a pendant, or when an armshell is made from the broad end of the cone, is never used as an ornament.[1] But of these prehistoric engraved shells two of the four known specimens show that this remaining part of the shell was carefully decorated in a way which suggests that these shells must either have been highly valued ornaments, or else have constituted a class of object which has now ceased to exist in the Possession. Indeed, the question admits of being considered on a

[1] We may, however, refer to the designs, usually totemistic, scratched on shells of the large pearl oyster (*Meleagrina margaritifera*) in Torres Straits. Cf. *Camb. Univ. Expedition to Torres Straits*, vol. v, fig. 21, p. 169.

wider basis than is implied by the statement that nothing like these shells has previously been found in British New Guinea, and we believe it may be stated that engraved cone shells or *conus* armlets have not hitherto been reported from Melanesia. Although three of the specimens under consideration are so much weathered as to crumble easily, cone shells when fresh are extremely hard. The question then arises how the engraving was done. The ophicalcite blades found on the Rainu site with the cone shells will not scratch a good specimen of the modern cone shell armlet. Stone 'quarried' at Suloga will scratch such an armlet, though not readily; we, however, found that fragments of obsidian picked up in the villages of Goodenough Bay readily scratched an armshell, leaving a clean, well-defined furrow such as the Rainu shells must have exhibited when first engraved. The condition of these shells does not, to our mind, offer any solution to the problem of their age; their surface is so weathered as to be scratched easily with the thumb-nail, but we cannot say whether this indicates an age greater than a couple of decades, considering the fact that the shells have been buried at no great depth in damp soil in a hot climate with a prolonged rainy season.

Pottery.

In 1905 Mr. Monckton gave to the British Museum a large collection of pottery fragments from the Rainu site. The chief and obvious interest of his gift lies in the fact that this collection consists of fragments of vessels far superior, in construction, symmetry, and ornamentation, to anything which is made in the neighbourhood of Rainu at the present day. From the fragments it is clear that the vessels were mainly of large size, and the sides average about 10 mm. in thickness; the pottery is hard, often extremely hard, and usually shows a reddish or black exterior. Most of the pots, to judge from the fragments, were either large bowls, hemispherical or more than hemispherical, or shallow circular dishes, some encircled with a broad flat lip, some with low sides rising more or less abruptly from the curved bottom.[1]

[1] This prehistoric pottery is most nearly approached by certain large hemispherical vessels in which the cleaned bones of the Murua dead are exposed in rock shelters; some of these bowls collected by the Daniels Ethnographical Expedition and now in the British Museum (Nos. 1906. 10–13. 34 to 38) are 420 mm. wide and 230 mm. deep. Their rims are often ornamented or impressed with incised patterns and the latter are generally present forming a circle

Most of the fragments figured belong apparently to vessels of the first description; on pl. xi, fig. 10, and pl. xii, fig. 9, are examples of the two varieties of the second.

The majority of the pots have a lip surrounding the rim; this lip may be rounded, and curve outwards, as in pl. x, fig. 5, &c., or it may be flat and project abruptly, as in pl. xi, fig. 5, &c. Where there is no rim, there is frequently a handle, which may be of the 'ribbon' type, pl. xii, fig. 1, &c., or of the type shown in pl. xii, fig. 4, familiar from the so-called 'food vessels' from Northern British barrows of the bronze age. The resemblance is strengthened by the tendency shown in both cases for these handles to become mere ornamental excrescences and to appear in more than one row. In some cases the vessel is encircled by a flange, moulded, as pl. xii, fig. 14, or with pierced work, pl. xi, fig. 3, &c.

The ornament is extremely varied, and is chiefly incised or impressed; the most frequent designs are punch-marks, spirals, concentric arcs, and circles, string pattern, groups of straight lines arranged in triangles, meander patterns, and so forth. Occasionally a zigzag is obtained in relief by means of a series of triangular impressions (pl. xi, fig. 9). Perhaps the most striking form of ornament is that obtained by means of open work. This decoration in its simplest form appears in pl. xi, fig. 4, where round holes are punched in a moulded flange. These holes may well have served some useful purpose, e. g. for suspending the vessel. In fig. 3 of the same plate the apertures become more essentially ornamental; in figs. 2, 5, 6 the openwork has invaded the lip, and in fig. 1 of this plate and pl. xii, fig. 16, ornamental apertures occur in the side of the pot itself.

Next to the open work, perhaps, in interest is the remarkably perfect spiral shown in pl. x, fig. 3.

Another form of decoration is represent[illegible] in the applied circles, meanders, and bands, which often accompany the incised ornament. These applied bands, &c., are sometimes plain and sometimes indented. In connexion with this form, attention may be called to the fine applied spiral in pl. x, fig. 2. Ornamentation is usually confined to the exterior, exceptions such as pl. xi, figs. 8 and 16, being rare.

Among the pottery fragments were found three which must evidently have been the necks of bottle-shaped vases. Two of these are plain as fig. 13 of pl. x, the other (fig. 12) has transverse

immediately below the rim. Captain Barton informs us that these bowls are made at Kwatota, an island of the Amphlett Group.

ornamental ridges in low relief. A glance at the interior surface of fig. 13 shows that it was made by coiling. It is noteworthy that, as far as the country is known, no vessels with necks are made or used in British New Guinea. The nature of the pottery object shown in fig. 11 of plate x is uncertain. It somewhat resembles the fragment of a spindle whorl which has been broken longitudinally; possibly it is the weight of a pump drill. In pl. ix, figs. 4 and 6, are shown two pottery club heads which also come from the Rainu site. These are presumably ceremonial, as is the modern wooden club cut from the solid, of which the head is shown for purposes of comparison in fig. 3 of the same plate. The latter, although obtained at Port Moresby, was said to come from the mountains far inland.

The last series of prehistoric pottery (pl. xiii and fig. 5) consists of a number of fragments collected by one of us (C. G. S.) on the island of Dauko, some four miles from Port Moresby. Dauko is a low coral island covered with rank grass and bearing a few scattered trees and bushes of the common coast-loving plants of the district. It is at present uninhabited, and all that could be discovered concerning any previous population is a legend that, for a brief period, perhaps about four generations ago, the folk of the Port Moresby villages, together usually termed Hanuabada, migrated to Dauko during a severe epidemic and lived there till the disease had spent its force. But the natives assert that this pottery cannot be related to this short immigration, and, indeed, the style of ornament upon these fragments differs entirely from that found among any of the Motuoid tribes, the pot-makers of the whole Central Division.

The vessels of which fragments were collected differ in type and decoration from those at Rainu. No trace of a handle is found on any of the fragments, and in only one case is the pot furnished with a lip (pl. xiii, fig. 3). This lip is flat and broad and expands abruptly outwards from the side of the pot, the ornamentation being on the upper surface of the lip. In all other cases the fragments show that the pots were of the same type, circular, with a perpendicular or slightly incurved rim about 32–40 mm. deep, below which the sides take an abrupt bend inwards. The ornamentation, which in all cases but one seems confined to this rim, is of one kind only, incised. Bands of lines, simple hatching, cross-hatching, zigzags, meanders of string pattern and arcs, are all represented, and the decoration is more minute and less bold than that of the Rainu

pots and, in consequence, the general effect of the vessel must have been far less striking. The exception, fig. 5 (text), mentioned above is the fragment of the side of a vessel which has been ornamented with broad bands of a reddish pigment. This, with another fragment from the same site (pl. xiii, fig. 3), is the only example collected from any locality which shows an attempt to apply coloured decoration to pottery.



Fig. 5.

The almost perfect symmetry exhibited by the prehistoric pottery as a whole—to judge from the larger fragments—might give rise to the question whether the use of the wheel were known. But apart from the fact that the wheel is unknown in Melanesia, the women of the Motu stock at the present day make narrow-mouthed vessels, in some instances with bodies approximately spherical, of perfect symmetry by the simple expedient of giving an occasional turn with one hand to the board or fragment of old pot upon which the lump of wet clay is supported.

DESCRIPTION OF PLATES VIII–XIII (Pottery)

PLATE VIII

Fig. 1. Obsidian spearhead; found at Misima (see p. 328).
Fig. 2. Obsidian axe-blade; found in a creek in the Yodda valley (see p. 327).
Figs. 3, 4, and 5. Engraved *Conus* shells; found at Rainu (see p. 332).
Figs. 6 and 7. Obsidian flake; obtained in Goodenough Island (see p. 328).

PLATE IX

Figs. 1 and 2. Ophicalcite adze-blades found at Rainu (see p. 331).
Fig. 3. Wooden ceremonial club; obtained at Port Moresby (see p. 335).
Figs. 4 and 6. Pottery club-heads; found at Rainu (see p. 335).
Fig. 5. Obsidian flake; found at Wanai Bay, Murua (see p. 328).
Fig. 7. Stone pestle and mortar; found 12 ft. below the surface of the ground in the Yodda valley (see p. 328).

PLATE X

Fig. 1. Pottery fragment; part of rim of vessel, reddish surface, grey body; the side of the bowl expands outward to form a broad rim of which the horizontal surface is decorated with incised spirals, and, at the edge, with a shallow groove between two rows of diagonal punch marks. The external edge of the rim appears to have been moulded. 1905. 2-9. 193.[1]

[1] This and the subsequent numbers refer to the British Museum Registration Catalogue.

Fig. 2. Pottery fragment; greyish-buff, ornamented with an appliqué spiral in relief. 1905. 2–9. 302.

Fig. 3. Pottery fragment; part of rim of vessel, reddish grey, ornamented with an impressed spiral and, at the edge of the rim, a row of shallow circular impressions. The surface of the interior is ribbed horizontally. 1905. 2–9. 194.

Fig. 4. Pottery fragment; part of rim of vessel, reddish surface, grey body; side ornamented with incised concentric circles; the rim expands abruptly outward to form a lip, curling slightly downwards. 1905. 2–9. 203.

Fig. 5. Pottery fragment; part of side of vessel, greyish-buff, with fluted rim ornamented here and there with small knobs. Ornamented with series of impressed concentric circles outlined with punched dots, and with meanders in relief. A shallow groove encircles the pot immediately below the rim, and below this is a line of punched dots. 1905. 2–9. 214 a.

Fig. 6. Pottery fragment; reddish grey, with two small appliqué circles in high relief outlined with punched dots. 1905. 2–9. 303.

Fig. 7. Pottery fragment; brownish black with curved line in high relief, below which is an impressed concentric chevron pattern. 1905. 2–9. 298.

Fig. 8. Pottery fragment; greyish red, ornamented with curved indented band in high relief. 1905. 2–9. 297.

Fig. 9. Pottery fragment; part of rim of vessel with everted lip, below which is an indented band in relief. Below this again is a band of diagonal lines of incised string pattern. The edge of the lip is similarly ornamented, but the marking is very faint. 1905. 2–9. 268.

Fig. 10. Pottery fragment; part of rim of vessel; about 3 cm. from the edge, the vessel is encircled by an indented ridge; above this, by a meander of impressed string pattern. 1905. 2–9. 258.

Fig. 11. Pottery fragment; apparently part of an object in shape a double cone, pierced vertically by a large aperture. The more depressed conical portion is ornamented with bands of impressed lines outlined with punched dots; the more elevated conical portion with impressed lines encircling it spirally. 1905. 2–9. 315.

Fig. 12. Pottery fragment; spout of a vessel, red pottery, cylindrical, with a low flange about 5 mm. from the edge and one or more raised bands, where the neck meets the body.

Fig. 13. Pottery fragment; spout of a vessel, reddish brown, quite plain, cylindrical.

PLATE XI

Fig. 1. Pottery fragment; part of rim of vessel, reddish-grey pottery, expanding outwards to a rounded lip immediately below which is a row of 11 holes between two bands, with two vertical lines in low relief running up over the edge of the lip. Below the holes are three ridges in low relief, the second underlined with punch marks; the rest is decorated with impressed herring-bone pattern. 1905. 2–9. 248.

Fig. 2. Pottery fragment; part of rim of vessel, pale-buff pottery, lip expanding outward and pierced with four holes (three only complete), running diagonally from the upper surface of the lip to the under-side on the exterior;

the upper surface of the lip, where not ornamented with holes, is grooved longitudinally. The exterior is ornamented with lines of punch marks. 1905. 2-9. 246.

Fig. 3. Pottery fragment; part of rim of vessel, reddish pottery; at the edge the exterior is encircled by a band of diagonal lines of impressed string pattern; below this is a broad flange, at right angles to the body, with large triangular perforations, between which runs a double zigzag of impressed string pattern. 1905. 2-9. 239.

Fig. 4. Pottery fragment; part of a rim of a vessel, reddish-grey pottery; 20 mm. from the edge the vessel is encircled with a broad flange with moulded edge, perforated vertically with circular holes. The edge of this flange is ornamented with impressed diagonal string patterns. 1905. 2-9. 244.

Fig. 5. Pottery fragment; part of rim of vessel, reddish-grey pottery, with abruptly everted lip, pierced with oblong apertures between rows of punched dots.

Fig. 6. Pottery fragment; part of lip of vessel, with a double row of triangular apertures apex to apex alternately, and on the rim a similar pattern punched in miniature. The edge of the lip ornamented with incised diagonals. 1905. 2-9. 241.

Fig. 7. Pottery fragment; part of rim of vessel, reddish pottery, edge flattened at the top and forming a lip on exterior and interior, upper surface ornamented with double row of punched dots; edge of exterior lip with punched triangles.

Fig. 8. Pottery fragment; part of rim of vessel, reddish pottery, everted lip ornamented on the inner surface with horizontal lines of incised dots interrupted at intervals by pairs of transverse ridges. The exterior of the pot is decorated with series of impressed concentric circles outlined with incised dots. 1905. 2-9. 216.

Fig. 9. Pottery fragment; part of rim of vessel, reddish-grey pottery, abruptly everted lip, the upper surface of which is ornamented with three longitudinal lines of pattern, a zigzag in relief obtained by punching down the background, between two rows of incised dots. 1905. 2-9. 238.

Fig. 10. Pottery fragment; part of rim of vessel, greyish-buff pottery, abruptly everted lip, the upper surface ornamented with deeply incised herring-bone pattern. 1905. 2-9. 232.

Fig. 11. Pottery fragment; part of rim of vessel, rounded edge, below which is a ridge in low relief ornamented with diagonal lines of impressed string pattern; below this the body ornamented with incised horizontal lines. 1905. 2-9. 148.

Fig. 12. Pottery fragment; part of rim of vessel, reddish-black pottery; round the edge on the exterior runs a zigzag in partial relief, obtained by punching down the background; below this panels of rough chevron pattern, incised. 1905. 2-9. 250.

Fig. 13. Pottery fragment; part of rim of vessel, black pottery; round the edge on the exterior runs a band of incised diagonal lines grouped in triangles. 1905. 2-9. 229.

Fig. 14. Pottery fragment; part of rim of vessel, reddish pottery, lip slightly incurved, upper surface, which slopes downwards toward the exterior, ornamented with incised diagonal lines, with a row of dots along approximately every other one; below, a plain ridge encircles the exterior. 1905. 2-9. 228.

Fig. 15. Pottery fragment; part of rim of vessel, reddish pottery, with sharply everted lip, ornamented along the edge with impressed dots; body ornamented with lines of similar dots and impressed horizontal lines. 1905. 2–9. 218.

Fig. 16. Pottery fragment; reddish pottery, part of side of a vessel, the interior ornamented with decoration of impressed string pattern arranged in panels. 1905. 2–9. 307.

Fig. 17. Pottery fragment; part of handle, reddish pottery, approximately circular in section, exterior ornamented with three longitudinal indented ridges. 1905. 2–9. 311.

Fig. 18. Pottery fragment; part of rim and side of vessel, greyish-black pottery, rounded in-curved lip ornamented with longitudinal grooves; below on exterior an impressed line of cord pattern, below, a broad band of incised diagonals arranged in triangles, and below again a series of incised horizontal lines. 1905. 2–9. 187.

PLATE XII

Fig. 1. Pottery fragment; part of rim of vessel, reddish pottery, rounded lip projecting outwards; about 4 cm. lower runs a horizontal ridge; the lip and ridge at intervals expand so as to meet and form a loop handle; the lip and the space between lip and ridge ornamented with incised dotted meanders. 1905. 2–9. 4.

Fig. 2. Pottery fragment; part of rim of vessel, reddish-black pottery; loop handle similar to fig. 1. 1905. 2–9. 2.

Fig. 3. Pottery fragment; part of rim of vessel, reddish grey-black pottery, small loop-handle as in fig. 1, upper surface of lip ornamented with longitudinal groove; the triangular projection which forms the handle decorated on upper surface with three vertical holes and a double groove following the outline; body ornamented with horizontal incised lines. 1905. 2–9. 82.

Fig. 4. Pottery fragment; part of rim of vessel, reddish-black pottery, rounded lip grooved longitudinally; below on the exterior is a triangular projection, the apex meeting the apex of a similar projection below it to form a loop handle; the upper surface of the former ornamented with grooved diagonals, the edges of both with impressed string pattern. Body ornamented with longitudinal grooves. 1905. 2–9. 40.

Fig. 5. Pottery fragment; part of rim of vessel, reddish pottery, rounded lip, at one point a projection similar to the loop handle of fig. 4, but imperforate. Below the rounded edge is an indented horizontal band in relief. 1905. 2–9. 75.

Fig. 6. Pottery fragment; part of rim of vessel, reddish pottery, rounded edge, 25 mm. from which is a small vertical applied loop handle. Below this the body is ornamented with impressed chevron pattern. 1905. 2–9. 289.

Fig. 7. Pottery fragment; part of side of vessel, greyish-buff pottery; along a ridge are a number of small applied projections, similar to the loop handle of fig. 6, but imperforate.

Fig. 8. Pottery fragment; part of side of vessel; reddish pottery, similar to last. 1905. 2–9. 292.

Fig. 9. Pottery fragment; part of rim of vessel, reddish pottery, lip projecting outwards; 40 mm. from edge the sides bend abruptly inwards, the angle

being marked by a well-defined ridge; above this runs a less prominent ridge, connected with the first at intervals by series of three applied knobs, similar to those in figs. 7 and 8, but smaller. 1905. 2–9. 287.

Fig. 10. Pottery fragment; part of rim of vessel, dark-reddish pottery, lip projecting outwards and grooved longitudinally on the upper surface. These grooves are interrupted at one point by a series of six small rounded knobs along the exterior edge of the lip. Below the lip run two shallow grooves and an incised line. 1905. 2–9. 286.

(It may be noticed here that the loop handle, appearing in its most perfect form in fig. 1 appears to pass through various stages of degradation, becoming small in fig. 6, imperforate and meaningless in figs. 7 and 8, and a mere decorative excrescence in 9 and 10.)

Fig. 11. Pottery fragment; part of rim of vessel with everted lip, reddish pottery; below is a horizontal applied band in relief with lozenge-shaped indentations. 1905. 2–9. 272.

Fig. 12. Pottery fragment; part of side of vessel, reddish pottery, with semicircular discoid projection. 1905. 2–9. 293.

Fig. 13. Pottery fragment; part of rim of vessel, reddish pottery, rounded lip projecting outwards, ornamented with horizontal grooves interrupted by impressed mouldings. 1905. 2–9. 280.

Fig. 14. Pottery fragment; part of rim of vessel, reddish pottery, flattened lip projecting outward, 20 mm. from which is a prominent ridge with impressed mouldings. 1905. 2–9. 251.

Fig. 15. Pottery fragment; reddish pottery, a short circular rod expanding somewhat abruptly at one end, where it has been broken off; possibly the leg of a vessel. 1905. 2–9. 316.

Fig. 16. Pottery fragment; part of rim of vessel; black pottery, square edge with single broad groove, the sides apparently pierced with a row of large circular apertures, and further ornamented with groups of diagonal impressed lines, and lines of small incised dots. 1905. 2–9. 306.

PLATE XIII

Fig. 1. Pottery fragment; part of rim of vessel; 30 mm. from edge the side bends abruptly inwards. Along the edge runs a horizontal band of incised lines with a row of scallops along the lower edge. Immediately above bend runs a similar band without scallops. L. 75 mm.

Fig. 2. Pottery fragment; part of rim of vessel, reddish pottery; along the edge runs a band of incised lines, and 23 mm. below is a similar band; between is a band of chevron pattern, the chevrons composed of four or five incised lines. L. 83 mm.

Fig. 3. Pottery fragment; part of rim of vessel of pale-buff pottery, with traces of red pigment on the surface. The vessel had an abruptly everted lip ornamented on the interior with vertical incised lines arranged in panels between bands of horizontal lines. L. 50 mm.

Fig. 4. Pottery fragment; part of rim of vessel, pale coarse pottery; 30 mm. from the edge the side bends abruptly inwards; above this as ornamentation is an incised indented line surrounded by bands of incised straight lines. L. 92 mm.

FIG. 5. Pottery fragment; part of rim of vessel, reddish-grey pottery; 18 mm. from edge the side bends abruptly inwards; along the edge on the exterior is an incised band of hatched contiguous triangles, vertices downwards. L. 86 mm.

FIG. 6. Pottery fragment; part of rim of vessel, coarse pale pottery, ornamented with parallel bands of incised cross-hatching and incised meanders. L. 55 mm.

FIG. 7. Pottery fragment; part of rim of vessel, of coarse buff pottery; 28 mm. from edge the side makes a slight but abrupt bend inwards. Above this is an ornamental scalloped band of incised hatching. L. 75 mm.

FIG. 8. Pottery fragment; part of rim of vessel, reddish pottery; 38 mm. below edge the side bends abruptly inwards; above are two horizontal bands of incised lines, and between them a dotted meander, also incised. L. 88 mm.

FIG. 9. Pottery fragment; part of rim of vessel, coarse grey pottery; 37 mm. from edge the side bends abruptly inwards; above this are three horizontal bands of incised lines, the two lower connected by a similar vertical band. L. 74 mm.

FIG. 5 (text). Pottery fragment; part of side of vessel, black pottery with reddish surfaces; the exterior is ornamented with horizontal bands of deeper red. L. 83 mm.



1 2



6 5 7

1, Spearhead (half size). 2, Axe-blade (half size). 3, 4, 5, Carved Shells (full size). 6, 7, Flake (half size).



ERRATUM

Plate VIII, Fig. 2, *for* (half size) *read* (one-fourth)



1, Spearhead (half size). 2, Axe-blade (half size). 3, 4, 5, Carved Shells (full size). 6, 7, Flake (half size).



1, 2, Adze-blades (reduced by $\frac{1}{6}$). 3, 4, 6, Clubheads (slightly reduced). 5, Flake (full size).
7, Pestle and Mortar (reduced to $\frac{1}{6}$).



Fragments of Pottery.



Fragments of Pottery.



Fragments of Pottery.

ERRATUM

Plate VIII, Fig. 2, *for* (half size) *read* (one-fourth)



1, Spearhead (half size). 2, Axe-blade (half size). 3, 4, 5, Carved Shells (full size). 6, 7, Flake (half size).

THE ORIGIN OF EXOGAMY

By NORTHCOTE W. THOMAS, M.A.

Whatever may have been the case originally, it is probably true that at the present day marriage prohibitions of some sort prevail everywhere, and controversies as to the origin of these regulations have been, and still are, frequent in the anthropological world. There are, as I have pointed out elsewhere, broadly speaking, three kinds of considerations which serve as a basis for marriage prohibitions: (*a*) in the first place the rules may be based on kinship organizations such as phratries, totem-kins, and the like; where marriage within the group of kin is prohibited, exogamy is said to prevail; and the corresponding term, endogamy, implies that there is a certain body of kin outside which marriage is not permitted. (*b*) In the second place locality may be taken as the basis of the marriage regulations and the rule may run that no one may marry a village-mate, or one of his own local group. (*c*) Finally, marriage regulations may be based on considerations of consanguinity (blood-relationship) or affinity (relationship by marriage), or both. In civilized communities these prohibited degrees are the only kind of marriage regulation in force. Not infrequently more than one of these kinds of regulation is operative, and we may have, for example, prohibition of marriage between those of the same kinship group and, at the same time, prohibition of marriage between those who, though of different kins, are closely related by blood. It may also happen that over and above regulations based on considerations of kinship or consanguinity, there is a regulation or, at any rate, a custom, requiring a man to marry a wife of his own tribe or caste; to this the name of endogamy has been often given. As there is a risk of grave confusion unless this term is qualified in some way, so as to distinguish kin endogamy from tribal, caste, or local endogamy, it might be well to abolish the term in the latter sense and substitute for it the word homoiogamy; this and its correlative heterogamy can be qualified by such adjectives as local, tribal, facultative, &c., to express the various

grades; what is commonly called local exogamy would then be termed compulsory local heterogamy.

Heterogamy has frequently, if not invariably, been evolved from exogamy, when for some reason the kins have become segregated. But there is no connexion or, at least, no obvious connexion between prohibited degrees and other kinds of marriage regulations.

Whether it be due to a defective terminology or to some other cause. it has not infrequently happened that students of primitive sociology, in putting forward theories of the origin of marriage prohibitions, have not distinguished between the origin of exogamy and the origin of prohibited degrees; where the distinction has been drawn, it has generally been assumed that exogamy is the earlier development and that regulations based on consanguinity have arisen as the human race became more enlightened or was impelled by jealousy to impose limitations of some sort.

Theories of the origin of exogamy or of prohibited degrees, or of both, have been put forward by J. F. McLennan, Lewis Morgan, Westermarck, A. E. Crawley, J. J. Atkinson and Andrew Lang, E. Durkheim and others; and we may classify the hypotheses into two main groups, distinguishable as ethical and non-ethical. The former assume that a conscious desire for reformation of evil practices developed at some time or another, the latter that the ethical element in marriage regulations is secondary and that they are due to superstition or instinct, to less moral causes like female infanticide, or to more moral movements like the desire to avoid jealousy within the local group or circle of hearth-mates.

The instinct on which Messrs. Crawley[1] and Westermarck[2] base their theories is the repulsion that exists, or is supposed to exist, between hearth-mates and those who have been brought up in close intercourse; Dr. Westermarck also argues that the marriage of near kin would have evil results, so that those who did not practise it or who practised it less than their neighbours would be at an advantage in the battle of life and their stocks would tend to survive, while the others would tend to die out; in this way, he thinks, an instinct against the intermarriage of near kin might be developed.[3]

It must be observed in the first place that though marriage

[1] *Mystic Rose*, p. 222. [2] *Human Marriage*, p. 320.

[3] Ibid., p. 352.

regulations of some sort seem to be universal, there is hardly a single relationship which has been universally held to form a bar to marriage,[1] and though it is possible that these are secondary developments, it remains to be proved that the instinct postulated by the writers in question is a *vera causa*; for, as Mr. Lang[2] has pointed out, if there is one thing more than another which should promote incest (on this theory), it is the separation of brothers and sisters long before puberty, which is such a characteristic feature of some primitive societies. If such rules of avoidance are intended to prevent incest, the prevention of close intercourse from youth onwards is, if the theory be correct, precisely the means which would promote the love it is meant to prevent; it must not of course be forgotten that the custom of brother and sister avoidance is life long and does not cease to act as a check at any time of life. But *ex hypothesi* the closer the relation and intercourse, the less danger there was of incest, and we are entitled to ask why the custom of brother and sister avoidance arose at all if it removed the greatest safeguard against incest. If hearth-mates develop an instinct against sexual relations with each other, it would be unnecessary to separate brother and sister for reasons of sex; and it would never occur to any one to propose that they should be separated to provide against non-existent dangers.

This criticism, however, assumes that avoidance is a custom of human origin consciously instituted with a definite purpose; and we are hardly entitled to assume this. It is true that the facts cited by Dr. Westermarck[3] as to separation of the sexes among some of the higher apes—the young males are carried by the father, the young females by the mother—are hardly sufficient to allow us to formulate any hypothesis as to the existence in ape society of anything like a custom of avoidance, or of its germ; but the possibility must be borne in mind, especially if it can be shown that avoidance is known in other orders of mammalia. It need hardly be said that inquiries into the social organization either of the primates or of other mammals are at best calculated to aid us only indirectly in the search for human origins; so far as we know, there is no near ancestor of man now living upon the earth; the anthropoids and other apes are merely his cousins, and though in the main the chimpanzee is zoologically his nearest neighbour,

[1] *Human Marriage*, pp. 290 sq.; *Année Sociologique*, i. 38.

[2] *Social Origins*, p. 240.

[3] *Human Marriage*, p. 13.

more than one other species come nearer to man in respect of single characteristics. Even were it otherwise and were one species pre-eminent in respect of every single point of resemblance to man, it would still be difficult or impossible to base any cogent argument on the social habits of apes; for, even with our present limited knowledge, we can say that some divergence in respect of type of society is found among the anthropoids; but as the Simiidae are more closely related *inter se* than any species is to man, it naturally follows that the differential evolution which is in evidence within the family of the Simiidae would be not less but more strongly marked when we come to compare the Simiidae and the Hominidae. If therefore we examine the social habits of mammals in order to throw light on human sociology, we search for analogies and suggestions, not proofs.

To take only a single point, no amount of argument will settle whether primitive man was or was not jealous. Jealousy is very marked among many of the higher mammals and it is highly probable that primitive man was so too; but even if a more extended knowledge of ape psychology shows that it is absent among them, we need hardly regard the fact as conclusive evidence that man was not jealous in his early stages. The Oneida community is hardly the modern representative of the primitive human group.

There are numerous types of animal societies, and the relation between the social type and the form of sexual relations is sometimes very marked, sometimes to all appearances entirely absent. There may be a band of females and young with an old male as its permanent head; or the old males may live apart from the females for the greater part of the year. The community may be made up of individuals of all ages and both sexes, or there may be different groups for different ages for the two sexes, or for females with and without young ones.

Among the anthropoids the gorilla seems to live in families, consisting of one adult pair and the young ones, the latter being eventually driven away to form small bands which break up as they in turn form family groups.[1] The old Orang Outan, on the other hand, is solitary, and the remainder live in small groups;[2] while the chimpanzee, according to some accounts, lives in quite

[1] *Human Marriage*, p. 13; Du Chaillu, *Voyages* (Paris, 1863), p. 392.
[2] *Human Marriage*, p. 13.

small groups directed by an old male.[1] But in most cases we are quite in the dark as to the character of the sexual relations of the apes, whether they are monogamous, polygynous, or polygamous in their natural state. In fact it is only in the case of domesticated or semi-domesticated animals such as horses, camels, and cattle, wild or otherwise, that we really know much about these questions, unless, as is the case with many carnivora, the animals pair and are, at any rate for a time, monogamous.

As a result of his observations of wild or semi-wild cattle in New Caledonia a theory of human social origins was put forward by the late Mr. J. J. Atkinson,[2] based on the idea that there was in the pre- or proto-human condition a herd composed of one old male with adult females and young of both sexes. In process of time, so Mr. Atkinson conceived, the young males, originally driven out from the herd just as the young bulls are expelled by their sire, were permitted to remain, greatly to the advantage of the herd for purposes of defence. The sire at the outset had rights over all the females born in the horde; consequently it follows that if, as Mr. Atkinson seems to suggest, the young male eventually succeeded to his father's harem, he had rights over his sisters as well as over the other women (p. 242); this, however, conflicts with the primal law of brother and sister avoidance, for whose existence Mr. Atkinson suggested the explanation that only on condition of such avoidance would a young male be permitted by his sire to remain in the horde.

Possibly the passage must be read in another sense; for the corner stone of Mr. Atkinson's theory is that the young males began to introduce females from outside, that the old male was induced to recognize the exclusive rights of the young males over these introduced wives, and that when the sire died, so far from his wives passing to the young males of the group, outside suitors were found for them who changed their residence and took up their abode with their wives. As a further development, so Mr. Atkinson supposed, sexual relations came to be forbidden between fathers and daughters and there came into existence a general prohibition to marry a group mate.

Mr. Atkinson's case did not rest entirely on zoological evidence, for he argued that, besides being a thinkable hypothesis of human social origins, his theory gave a more satisfactory explanation of

[1] *Human Marriage*, p. 13.

[2] *Social Origins*, pp. 210–94.

customs of avoidance than those offered (for the case of mother-in-law and son-in-law) by Lord Avebury, who attributes it to enmity caused by the custom of abducting the bride, and by Dr. Tylor, who suggests that an outsider had to be 'cut', at least till the birth of a child had, as it were, legalized his marriage.[1] Mr. Atkinson held that customs of avoidance—the rule that certain relatives must not speak to, or even see, each other—are in the main due to jealousy, and are explicable by the successive steps which he supposes to have led from the primaeval horde to the savage tribe of the present day. Thus, the avoidance of father-in-law and daughter-in-law dates back to the time when the young males first began to introduce into the group females whom they had captured outside and over whom they claimed exclusive rights; the old male having previously claimed rights over all adult females within the group, enmity between father and son was only avoided by the adoption of a device which put the latter's wife out of reach of the sire. Mr. Atkinson further supposed that alien sons-in-law in time began to take the daughters to wife before the death of the old male; here again avoidance between father-in-law and son-in-law provided a means of smoothing over difficulties, for the latter would be a usurper of the former's rights and therefore at enmity with him. In like manner the father-in-law's jealousy compelled the incoming son-in-law to avoid his mother-in-law, the wife of the old male.

One criticism of this theory of the origin of avoidances at once suggests itself; if avoidance was a means of diminishing friction or preventing jealousy, and if father-in-law and son-in-law actually avoid one another because the latter infringed upon the rights of the former, it is at least very singular that practically no trace of father-daughter avoidance is found. One would have imagined that it was no less needed for the protection of the rights of the alien son-in-law than the avoidance of his mother-in-law by the intruder was needed for the protection of his father-in-law's rights. Mr. Atkinson supposed that father-daughter marriage disappeared little by little, and so gradually that it left no traces in custom. Now the relation of the daughters of the young males to the sire of the latter is a dark point in Mr. Atkinson's theory; but even if we deal with the position only of the daughters of the old male himself, it is clear that the introduction of the alien son-in-law in his life-time must have speedily broken down any custom of father-daughter

[1] *J. A. I.*, xviii. 245–69.

marriage, and set up so strong a body of young males within the group with interests opposed to those of the old male as to render the position of the latter untenable in a very short time. Hence Mr. Atkinson's theory of the slow disappearance of father-daughter marriage is hardly likely.

Again, except as a part of systematized avoidances to which the whole of a group and not the individual only are subjected, it seems probable that there is no hindrance to the meeting of mother and son, or at any rate not more than to the social intercourse of father and daughter. Now Mr. Atkinson does not suppose that mother and son marriage was ever practised, and the absence of avoidance between both male and female parents and their children of opposite sexes is, prima facie, a ground for supposing that if mother and son marriage was unknown, so too was father and daughter marriage.

We may therefore ask on what grounds Mr. Atkinson made sexual relations of near kin a part of his theory. He implies that father-daughter unions are found among the half-wild cattle of New Caledonia, though he nowhere explicitly states it as a fact. It has already been pointed out that zoological evidence supplies us at best with analogies; even if therefore it is a fact that such unions are known among half-domesticated cattle, it is by no means incumbent upon us to accept them as an element in pre- or proto-human social organization. If it can be shown that among some of the higher mammals such unions are barred, the New Caledonian evidence is still further discounted. There is not much evidence on the point, but authorities report, though possibly only on the evidence of natives and not from personal observation, that the Khirgiz stallion drives out his own fillies as soon as they are in heat, whereupon they run in a straight line up wind till they come upon another herd. In the same way the young stallion avoids his dam; as a rule he is driven out by his sire, just as the young bulls are driven out, but it may happen that he is restored to the herd at a later period; in this case it is necessary to remove his dam; otherwise he treats her as the fillies are used by the sire.[1] Apparently this account relates to the tame or semi-wild horse; but Aristotle[2] relates that the young bull camel has an aversion

[1] *Z. f. E.*, iii. 302; cf. Brehm, *Tierleben*[2], iii. 18.

[2] Aristotle, *Hist. Anim.* IX. xxxiv. 1.

to connexion with his dam, and we may accept as a fact the existence of sexual aversion among animals between parents and offspring.

It is of interest to note that the bull camel can be deceived, if the female is covered up. From this we may perhaps assume that the tendency of domestication is, in this as in so many other cases, to obliterate the instincts of the wild state. Whether this is so or not, it is clearly immaterial whether man at the present day usually or invariably shows this kind of aversion. It is a legitimate hypothesis that man once shared this instinctive feeling with other mammals, even if it can be shown that in our own day in South America and other parts of the world the union of parents and children is not uncommon or even frequent. This point is perhaps the most important objection to Mr. Atkinson's premisses, but it is far from being the only one. He has taken as his model the form of society familiar to him from observation of half-wild cattle; but it is by no means apparent that they are the nearest analogues to proto-human society. Why, for example, must it be assumed that there was one old male in the original group together with several adult females and young of both sexes? Even if we reject the possibility of groups constituted by monogamous pairs and their children as affording no scope for social development, it is far from clear that the original group did not contain several adult males, either monogamous or polygynous, each supreme over his own family and suffering no interference with his sexual rights. The tarpan of Tartary lives in herds organized on this system, and so does the jiggetai.[1] Even were no such examples known to us, the variety of group type among the apes is such that we must feel great doubt as to the most probable form of the primitive human family.

In order to limit the field to be examined we may perhaps exclude from our purview the multiplex monogamous group (composed of monogamous families), not because such a form of society is *a priori* improbable, but because, always assuming that father-daughter marriage is barred, it would not differ in essentials from the multiplex polygynous group, save that it would be easier for the unattached young males to abduct a wife or two, though not so easy as it would be in the simple polygynous group, which is the alternative form of society to be considered.

[1] Brehm, *Tierleben*[3], iii. 7, 18.

Familiarity with the habits of cattle perhaps led Mr. Atkinson to over-estimate the power of the old male in the primitive human group; for it is one thing for the old bull or the old stallion to hold his own against one or more younger competitors and quite another thing for an animal so inadequately provided with natural weapons as was primitive man to attempt to hold his own single-handed against several rivals. The horns of the bull or the hoofs of the horse may turn the scale in favour of the experienced and wary duellist in a very few minutes; but man had no such formidable weapons. The gorilla may be able to do much against a human antagonist with fists and teeth; but it is another matter when it is a question of several adversaries of but slightly inferior strength and equally resistant skulls. It may well be that the simple polygynous group was never a form of human society; or if it was, it may have been speedily transformed into a multiplex group for the sake of the greater protection against a common enemy which is afforded by the presence of several adult males, ready to join forces, as do the stallions of the large assemblies of horses. Practically, therefore, we are reduced to considering the multiplex polygynous group—Mr. Atkinson's second stage—but without father-daughter unions.

It was a corner-stone of Mr. Atkinson's theory that adelphic (brother and sister) unions were prevented by the expulsion of the young males and the appropriation of the young females by their sire. If, therefore, the latter factor is eliminated we have to face the possibility that adelphic unions prevailed, as Lewis Morgan supposed. If both young males and young females were permanently expelled from the herd—and it must be noted that among some mammals the exile of the young males is only temporary and ceases when they have captured a harem of their own—it might still happen that the males founded a new group of their own, while the females joined another, perhaps already existing, group. Let us suppose, however, that the young males hang about the outskirts of their original group, as do tarpans and others of the horse tribe round the herd in which they were born, and eventually rejoin it. What follows?

If the several males in the multiplex group are not at liberty to appropriate each other's female offspring, the aversion between parent and child causing the latter to be driven out, it would be equally impossible for the young male to bring the exiled female

back to the group. Adelphic unions are therefore barred, even if the young females are not snapped up by another group.

We have seen that in primitive groups at the present day brother and sister avoidance is widely practised, while parents do not commonly shun their offspring of opposite sex. What is the meaning of this rather striking difference in conduct? It seems a legitimate hypothesis that in the latter case natural aversion existed at the outset and was sufficient to prevent unions of this kind, while in the case of brother and sister there was not necessarily any such natural bar, and legislation, that is to say what corresponded to it in those days, viz. the public opinion of the group, or of the older males, was needed to restrain the intermarriage of the offspring of the same parents. One way of attaining this might be by instituting a custom of avoidance, the germ of which is perhaps seen in the gibbon habit of separation of the young of different sexes. On the other hand we may perhaps with more probability regard adelphic avoidance as originally imposed on adults only, and due to the law which forbade sire and child to be members of the same group, but later extended backwards. But it is by no means essential to the theory here put forward that any kind of avoidance should have been known in primitive times.

But, as we have already seen, adelphic avoidance is not the only custom of this kind; avoidance between relatives by marriage is even more prominent, if not more widely found. Mr. Atkinson undertook to explain the genesis of these latter customs by supposing that in the first place alien females were introduced into the group not for the sire but for the youthful male offspring, and that this gave rise to avoidance between father-in-law and daughter-in-law as a protection of the rights of his sons; secondly that outside suitors came into the group for the daughters of the old male, at first only after the father's death, later as rivals to him for their hands, and that out of this arose avoidance between son-in-law and mother-in-law as a protection to the father-in-law's rights, and between son-in-law and father-in-law in order to diminish their enmity as rivals.

Now, as Dr. Tylor's statistics have conclusively shown,[1] so far as avoidance gives any clue, the original rule was for the husband to live with the wife; then came a period when he lived with her

[1] *J. A. I.*, xviii. 251.

family for a time and subsequently removed to his own people; finally came an age when the wife was taken to her husband's folk as soon as they became man and wife. Dr. Tylor was careful to point out that his data did not necessarily give information as to the primitive condition of mankind; but whether this is so or not, the conclusions seem to invalidate Mr. Atkinson's argument. If avoidance as we know it is primitive, his scheme is contradicted by the evidence as to the order of the stages brought forward by Dr. Tylor; if it is late, it is useless to explain the custom as an outcome of the conditions of the primitive group.

In point of fact avoidance of relatives-in-law is probably late, for it originated at a time when the husband resided with the wife and must have been the product of an age when friendly relations were already established between different communities; for, as Dr. Tylor pointed out, it is inconceivable that a man should remove at marriage into a hostile community, or even into a neutral one; the simple expedient of capturing a wife would permit him to remain among his friends. We are therefore at most concerned with adelphic avoidance.

To return to the primitive group, we have supposed that there existed father-daughter aversion, expulsion of the young females, temporary exile of the young males and their later return with brides from another group. Aversion between parents and offspring supplies an explanation of the origin of two prohibited degrees directly, and secondarily of the rule against adelphic unions. But in the expulsion of one set of females and the introduction of another we have the principle of exogamy; and if we suppose that only two communities were within such distance of each other and that exchange of females was possible or easy, we have at once the simplest possible form of exogamy, the intermarriage of two and only two groups. But at this point we are brought face to face with the problem of the origin of phratries and totem-kins, and of their mutual relations. Do these primary groups correspond to the former or to the latter?

For there are statements, as Mr. Lang points out in the present volume, to the effect that within the phratry, in the Urabunna and certain other Australian tribes, marriage is further limited to a single sept (totem-kin); and if this should be confirmed, we have to face the possibility that totemic exogamy is the germ and phratriac exogamy a later accretion.

As long as we are confronted with verifiable but unverified statements such as those about the Urabunna system of exogamy, it is futile to carry the discussion further. It is absolutely necessary to know whether totemic exogamy within the phratry does or does not exist; for on this point must turn to a large extent our answer to the question, Which is earlier—totem-kin or phratry?; if indeed exogamy did not for some reason develop in or become associated with a previously existing group in which we must recognize the germ of the totem-kin. For if Dr. Frazer's theory of the origin of totemism is correct—and recent researches among the Arunta show that conception is at any rate a *vera causa*, accepted by a totemistic people as their explanation, or rather as their rule of the origin of totems—we can hardly regard the exogamic law as anything but a later accretion. In fact it would not be surprising to find that the original germ, if so we must term conceptional totemism, developed in one direction into totemism, in another into a cult of animals or into magic. But it remains to be shown that the Arunta creed of the present day is primitive; it is therefore useless to discuss whether this theory of totemism is subversive of the hypothesis put forward in the present paper.

Peering into the dim past of the human race, we deal with possibilities rather than probabilities; historical data are denied us, and if the truly primitive survives at the present day, we have no touchstone by which to distinguish it from the accretions of countless ages. It is a truism that in dealing with peoples in the lower stages of culture we cannot always distinguish the rude from the primitive, nor the back-water from the main stream of human progress. Some of our uncertainty, however, is due to inaccurate or insufficient data; every year civilization and European culture snap some of the links which bind the dark-skinned races of mankind to their past, and perhaps it is not too much to say that another hundred years will see the world 'civilized'; it may be that the disappearance of primitive culture is inevitable; but the age which cuts down its representatives can at least garner the ethnographical harvest before it is too late, for archaeology alone can never tell us the story of the human race.



FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5



FIG. 6

THE SECRET OF THE VERGE WATCH

A STUDY IN SYMBOLISM AND DESIGN

By ARTHUR THOMSON, M.A.

In what is known in the trade as a 'Verge Watch', there is an elaborately engraved plate of circular form, which supports the balance-staff pivot, and protects the balance wheel. Apart from the beauty of their design, and the richness of their pierced work and chasing, these 'Watch-Cocks', as they are called, display other features of interest, which are well worth studying. The form of the escapement used in the verge watch is the oldest known; unfortunately we are ignorant of the name of its inventor. That it was in existence prior to 1513 is proved by the fact that Leonardo da Vinci makes mention of it, though pocket watches were not introduced till about 1625. This style of movement, probably owing to the simplicity of its construction, continued in use in the commoner class of watches up till the middle of the nineteenth century, when it was replaced by other and more effective forms of escapement.

Having made a considerable collection of these 'watch-cocks', the sole relics of worn-out and broken-up watches of the verge type, my attention has naturally been directed to their style and workmanship. They were made by specialists called 'cock makers', men of great skill as craftsmen and designers. Though most of these watch-cocks display a strong family resemblance, no two are absolutely alike, each exhibits the personality of its maker; they are in every sense artistic productions, and as such are well worth collecting and preserving. Whilst, as a rule, the groundwork of the design is based on the conventional treatment of flowers and foliage, there constantly recur among the specimens such devices as grotesque heads or masks, the figures of birds, baskets, vases, and the like. In grouping the watch-cocks according to the character of their design, the question naturally arose as to what interpretation was to be put on the repeated occurrence of the

above devices. The most obvious assumption was, that the recurrence of the same symbol pointed to the specimens being the product of the same school of craftsmen, where probably the apprentices copied and repeated the designs of their masters. No doubt such an explanation may to some extent account for the persistence of certain types, of what for the time being we may style ornament, but it does not adequately explain why the choice of emblems or devices should be so restricted and limited. Happening at the time to be interested in the subject of the 'Evil Eye', the thought naturally suggested itself to me, that possibly these devices and patterns partook of the nature of charms, whether to protect the watch itself or its owner is an open question. With the object of putting this suggestion to the test I have made a careful examination of all the specimens in my possession, some hundred and sixty or thereabouts, with the following results.

Of the examples in my collection, about 50 per cent. have a grotesque head engraved upon them. These heads seem to have no apparent connexion with the general design, and look as if they were introduced to meet some traditional requirement. Britten[1] who thinks that the earlier 'Cocks' were quite plain, dates the introduction of these quaint heads on them about the year 1700. At first it seemed possible that these might be intended to represent the Gorgon's head, but in no instance have I noticed the split or protruded tongue, the teeth, though often large and well pronounced, are never tusked, nor have I ever seen snakes introduced into the design. Support was given to the view that it was possibly the head of Bacchus, since in a considerable number of cases the head was represented crowned with flowers. In this connexion it is interesting to note that *Oscilla* or masks representing the head of Bacchus were frequently hung on fruit trees to avert the evil eye and preserve their fertility. For our purpose, however, the identification of the head is unnecessary, since it is generally admitted that the grotesqueness of the mask is in itself sufficient to divert the attention of the 'evil eye'. Elworthy[2] writing on this subject, says: 'The step from the famous death dealing visage (the Gorgon's head) as a protection against the evil eye it was believed to produce, is but short to that of hideous faces in general; and hence we find that strange and contorted

[1] *Old Clocks and Watches and their Makers.* Batsford, 1904, p. 527.

[2] *The Evil Eye.* John Murray, London, 1895, p. 147.

faces or masks were certainly used as objects to attract the evil eye, and so to absorb its influence and to protect the person wearing or displaying the mask.' There seems, therefore, adequate justification for assigning to this class of amulet the devices represented in fig. 1. In this series, it is interesting to note that in the majority of cases the chin is only imperfectly shown, in other instances the design does not include the mouth, but in all the wrinkled forehead and staring eyes are well displayed.

About 13 per cent. of my specimens have the form of a vase incorporated with the design. Of this kind of charm Elworthy[1] writes as follows: 'It was said by Plutarch that when Isis brought into the world Harpocrates, the posthumous son of Osiris, she wore an amulet round her neck in the form of a vase, the "Emblem of Ma" the goddess of truth. The vase is also a symbol of Osiris. This vase represented water: hence the vivifying power of nature, i.e. Osiris the personification of the Nile, which was thus typified by a vase.' In none of my specimens are the vases represented as having handles (see fig. 2) like the Amphorae or Canthari which are shown in the tablet brought by Dr. Arthur Evans from Taranto, and now deposited in the Ashmolean Museum. In Dr. Evans's opinion this tablet was employed for stamping the holy cakes used on various religious occasions, and the objects thereon represented are undoubtedly such as were used as charms. There appears, therefore, some reason for the assumption that the device of the vase on these watch-cocks has a similar significance, though on the other hand it must be admitted that their appearance corresponds with the revival of Greek ornament which took place towards the latter end of the eighteenth century.

Next in frequency in my collection (about 9 per cent.) are specimens displaying the figures of birds (see fig. 3). Of these, two are manifestly swans, the others represent birds of prey, more or less conventionally treated, but in two examples they are undoubtedly intended for eagles, and the others, there is little doubt, are representations of the same bird. It is surely something more than a coincidence that those birds, and those only, should be selected for incorporation in the design. Regarded as they are as sacred, from their association with Jupiter, we meet with repeated examples of their employment as charms against the evil eye. Elworthy (*loc. cit.*,

[1] *loc. cit.*, p. 125.

p. 326) records the occurrence of the eagle four times in specimens of the mano-pantea, and also figures an engraved onyx (*loc. cit.*, p. 131) with a central eye surrounded by figures of an eagle, Jupiter's head, a thunder-bolt, and a dolphin.

The symbol of abundance, a cornucopia, has long been used as a charm against the evil eye. It has been supposed to act by exciting the envy of the *Jettatore*, so distracting his gaze from the object on which, in the first instance, it was directed; other representations of plenty are supposed to act in a similar way. It is therefore interesting to note that baskets abundantly laden with fruit and flowers are not unfrequently engraved upon these watch-cocks. Of these, some examples are shown in fig. 4. It is difficult to account for the occurrence of such designs on the inside of a watch, unless on some such supposition as that advanced.

Of other forms of device met with, those displaying a radiating or star-like pattern are not uncommon. It requires but little stretch of the imagination to regard the central core as the sun from which the rays are represented as emerging. Such forms are common enough in the ornaments used on horse furniture to ward off the influence of the evil eye. Is it improbable that they are similarly employed here? (See fig. 5.)

There yet remain a few examples of designs not hitherto referred to. These are shown in fig. 6. The first two exhibit the head of the Dolphin, conventionally treated, concerning which Elworthy remarks that in Roman times the Dolphin was considered one of the special charms against the evil eye.

In the next two specimens a representation of a lyre is a prominent feature in the design. The same device is described by Elworthy as occurring on a mano-pantea, and curiously enough it is present in the terra-cotta mould preserved in the Ashmolean Museum, which, according to Dr. Evans, was used for stamping holy cakes.

Of the remaining examples in the figure, one displays what I take to be the sacred heart, whilst the other, the only example I have seen, presents a form, whether intentional or accidental, reminiscent of the crescent and the disk.

The rest of the specimens, amounting to about 12 per cent., do not present any features which call for special attention, the pattern being simply that of a foliated design without any additional device.

Such are the facts. In the course of the paper I have shown pretty clearly which way my own conclusions have been drifting,

but one must hesitate before committing oneself to a definite theory.

To summarize the results, it is, to say the least, extremely odd that so elaborate and artistic a piece of workmanship should be hidden away in the interior of a watch, when a simple plate would, for structural purposes, have been just as effective. Further, it is remarkable that the devices employed are those which are almost universally employed as charms against the evil eye. Midst the wide range of objects which lend themselves to decorative treatment, it is surely strange that the selection should have been limited to the examples quoted in a collection of over 160 specimens. It is instructive, too, to note that we have an analogous case in the variety of ornaments used on horse trappings, where there is little doubt that their selection has been determined by their supposed efficacy as charms.

Even granting that the designs on these watch-cocks were employed as a means of warding off the influence of the evil eye, it is hard to account for their occurrence in watches of English make, that supposition would necessitate the admission of some alien influence, most probably Italian. Now the watch and clock making industry was a product of middle and northern Europe, and spread southwards. If foreign workmen were employed in England they would most likely be Swiss, Germans, Flemings, or French. There were, however, Italian families whose names appear as designers, and such Frenchmen as Jean Bourquet (1723) and Pierre Bourdon (1725) published designs for the use of watchmakers which display a marked resemblance to those herein described. At a time when symbolism in design was much in vogue, those craftsmen no doubt set the fashion, a fashion which has since been slavishly followed, without any clear appreciation of the significance of the devices employed. This seems a not unreasonable explanation of the matter, for it is confessedly hard to imagine that the facts already stated amount to nothing more than mere coincidences.

The clue to the solution of the problem is, therefore, probably to be found in tracing some Italian influence among the early designers, or possibly the requirements of the Italian market may have induced our watchmakers to provide their foreign customers not only with a reliable time-keeper but also with a sure protection against the baneful influence of the evil eye.

L-'ÂR, OR THE TRANSFERENCE OF CONDITIONAL CURSES IN MOROCCO

By EDWARD WESTERMARCK, Ph.D.

The term *l-'âr* is applied by the Moors to a compulsory relation of a peculiar kind in which one person stands to another. The common expression, *Ána f'âr alláh u 'árak*, 'I am in God's *'âr* and your *'âr*,' implies that a man is bound to help me, or, generally, to grant my request whatever it may be, as also that if he does not do so his own welfare is at stake. The phrase, 'In God's *'âr*,' only serves to give solemnity to the appeal: 'I am under the protection of God, and for his sake you are obliged to help me.' But the word *l-'âr* is also used to denote the act by means of which a person places himself in the said relationship to another. *Hâd l-'âr 'álik*, 'This is *'âr* on you,' is the phrase in common use when an act of this kind is performed. If the person so appealed to is unwilling to grant the request, he answers, *Hâd l-'âr yiḫrâž fik*, 'May this *'âr* recoil upon you.'

The constraining character of *l-'âr* is due to the fact that it implies the transference of a conditional curse:—If you do not do what I wish you to do, then may you die, or may your children die, or may some other evil happen to you. That *l-'âr* implicitly contains a conditional curse is expressly stated by the people themselves, although in some cases this notion may be somewhat vague, or possibly have almost faded away.

Externally the custom of *l-'âr* presents such a variety of forms that, without the aid of a common term, it might be difficult to recognize them all as expressions of one and the same idea. The only feature which all these acts have in common is that they serve as outward conductors of conditional curses. A common method of performing *'âr* upon a person is to establish material contact with him by means of a bodily grasp. He may touch the person whom he invokes with his turban or with a fold of his dress, or he may

grasp with his hand either that person himself or his child or the horse which he is riding. Even by going to a horse in a stable and saying, *Ána f'âr l-'aud*, 'I am in the *'âr* of the horse,' a person may place himself under the protection of its owner; thus people often take refuge in the Sultan's stable. You may also make *'âr* upon a person by taking his son in your arms and giving him to his father, saying, 'This is *'âr* for you.' Another form of *'âr*-making is to take some food to the person invoked. If he cannot or will not grant the petitioner's request, he refuses to accept the food; but if he accepts it he is bound to do what is asked of him.

Among the Ulád Bu 'Azîz in Dukkâla and other Arab tribes of the plains, if a refugee enters another person's tent or only takes hold of the tent-pole, at the entrance of the tent, saying, *Ána fi 'âr lláh u 'ârák*, or, *Ána zaug fi ulidâtêk*, 'I am in God's *'âr* and your *'âr*,' or, 'I am seeking refuge with your children,' then the owner of the tent is obliged to assist him, at least by acting as a mediator between him and his pursuer. A similar rule prevails among those Arabic- and Berber-speaking tribes who live in houses. Among the Shluḥ (Berbers) of Glawi, in the Great Atlas, the refugee invokes the owner of the house in the following words:—*Zûgġ ġûfus nrâbb'i dwînnik áflan*, 'I am seeking refuge in God's and your hands, O So-and-so.' In such circumstances custom also requires that the pursuer shall not try to take the refugee out by force, but apply to the owner of the tent or house; nay, even if he is pursued by his governor, the soldiers first make representations to the protector to give up the refugee. Among the Ulád Bu 'Azîz, if a sheikh or governor wants to extort money from one of his subjects and the latter takes refuge in the tent of some important person who happens to be away from home, the wife of his absent host takes off her belt (*l-ḥzâm*) and gives it to him. The refugee then goes with it to the sheikh or governor; it is *'âr* on the part of the wife, and one-half of the claim will be remitted in consequence. The governor may also himself induce a refugee to leave the tent where he has fled by sending him his own rosary as a guarantee that he will not treat him badly. In this instance the pursued person gains power over his pursuer by possessing a thing which belongs to the latter. The following case occurred in a village among the Andjra mountains in Northern Morocco, where I was staying for some months. A man who had committed murder came once running to the village, pursued by the relatives of his victim. He found on a field some women belonging

to the family of my host, a highly respected shereef, and cried out, *Ána mzaug falláh u fiššerif*, 'I am seeking refuge with God and the shereef.' Without touching them he lay down on the ground, and they covered him with some of their clothes. The pursuers were thereby prevented from carrying out their intended revenge, and turned back to their village. In Andjra it also happens that a person who has been subject to unjust punishment goes to a place where some men are gathered practising rifle-shooting, bows down with his hands on his back, kisses the ground in four directions, and says, *Ána f'âr alláh u 'ârkum ya mwâlin l-mkâhäl šûfu fîa lilléh šíkwa 'al alláh u 'álikum ána mĕḍlúm*, 'I am in the *'âr* of God and your *'âr*, O masters of the guns, attend to me for the sake of God, I make an accusation to God and to you, I am innocent.' He remains bowed down with the right hand clenched behind his back and the left hand clasped round its wrist till the sportsmen have made *l-fât'ḥa l-măḳlûba*, 'the reversed *fât'ḥa*,' that is, till they, with the palms of their hands turned downwards, imprecate evils upon his enemy. When this is done, the chief of the sportsmen opens the hands of the supplicant, and all persons present clap their hands.

At Amzmiz, in the Great Atlas, I was told that if a man has committed a rape on another man's wife, and the offended husband is not strong enough to avenge himself, he makes a hole in a kettle, hangs the kettle round his neck, and goes about in this manner asking people to help him. This was said to be *'âr* of a very compulsory kind. Among the Ulád Bu 'Aziz a man whose wife has been seduced by another person or whose property has been interfered with, may go to his governor with a piece of his tent-cloth over his head. This is *'âr* upon the governor, who is now compelled to help him. Or instead of covering his head with the tent-cloth he may paint his face with cow-dung, or he may shave his hair, leaving only a lock (*l-grôn*) on each side of the top of the head and a fringe (*l-gúṣṣa*) over the forehead. Among other Arabs of the plains an injured husband who is too weak to avenge the infringement of his rights leaves seven tufts of hair on his head and goes to another tribe to ask for help. In these cases the conditional curse is obviously supposed to be seated in the kettle, or the tent-cloth, or the cow-dung, or the locks or tufts of hair, and from there to be transferred to the person or persons who are invoked. A similar idea undoubtedly underlies the custom of making a vow of blood-revenge by letting the hair grow until the vow has been fulfilled.

This is *'âr* made by a person upon himself: the conditional self-imprecation or oath clings to his hair and will fall upon his head if he violates it. Speaking of the same custom practised by the ancient Arabs, Wellhausen suggests that the hair was allowed to grow for the purpose of being sacrificed after the fulfilment of the vow.[1] But this explanation, far-fetched by itself, is in my opinion disproved by the facts to which I have just referred.

Sometimes *l-'âr* consists in making a heap of stones. Both among the Arabs of Ulád Bu 'Azîz in Dukkâla and among the Andjra mountaineers I found the following custom prevalent. If two men agree to meet at a certain place at night for the purpose of going out together to rob and one of them fails to appear, the other man makes a cairn at the appointed place and takes the faithless comrade to it the next morning. The latter is then obliged to give him a nice entertainment. The cairn may on the one hand serve as a proof that its maker had kept his engagement; but its chief object is without doubt to compel the other person to compensate him by a feast, the cairn being *'âr* upon him. In this case, as in all kinds of *l-'âr*, the curse is conditional; but unconditional curses are also frequently embodied in heaps of stones. Thus in the north of Morocco, if a muleteer buys a new mule, the other muleteers of the place ask him to give them an entertainment, and if he refuses they make a cairn asking God to send misfortune on the mule which he had bought. A common practice among scribes is to make a cursing cairn for a wealthy man whom they have in vain asked for a present. They make a cairn either outside his house or in some open place, read over it some passages of the Koran, and, with the palms of their hands turned downwards, pronounce a curse upon the niggard, invoking God to deprive him of his wealth or calling down on him some other misfortune. Among the Berbers of Aglu, in the Sus province, each of the scribes takes a stone from the cairn which they have made and throws it away, saying, in Shelḥa, *Ġîkad lli n'šttit takărkôrtad afillasisttit răbb'i ġailli tísfărḥān*, 'As we dispersed this heap of stones, so may God disperse for him that which makes him happy.' The person on whose account the cairn was made is thus cursed by the scribes; he is, as the Arabs say, *msḫôṭ ṭṭúlba*. Cursing is the essence of the ceremony. The reading of the Koran, again, is an imitation of the funeral rite; the scribes say that the cairn is the tomb of So-and-so. In other instances the scribes plunge a knife

[1] Wellhausen, *Reste arabischen Heidentums*, p. 124.

into the ground, cover it with white clothing representing the shroud of a corpse, and recite *l-búrḍa*, just as at an ordinary burial. Or they perform the funeral ceremony over seven little stones which they have wrapped up in clothes.

The most powerful of all methods of making *'âr*, however, is to sacrifice an animal on the threshold of the house or at the entrance of the tent of the person from whom a benefit is asked. If he steps over the blood or even only catches a glimpse of it, he is, for his own sake, obliged to grant the request made by the person who killed the animal. If he has previously heard that an animal has been slaughtered outside his dwelling and he is unwilling to do what is asked of him, he tells his servants to remove the dead body and to wash away the blood carefully, and in this case, when he has not seen the blood at all, the danger is much lessened. On the other hand, if he fulfils the wish of the supplicant, he need not be afraid of stepping over the blood, as the curse it contains is only conditional. In some parts of Morocco, at least, it is the rule that if a person who has been thus appealed to is unable to give the assistance required, he is obliged to provide another animal to be killed as *'âr* for somebody else. When an animal is killed as *'âr*, the ordinary phrase *bismilláh*, 'In the name of God,' is not uttered; and it must not be eaten either by the sacrificer or by the person on whose account it is sacrificed. It is eaten only by the poor.

The great efficacy ascribed to this form of *l-'âr* is entirely due to the blood. As I have pointed out elsewhere,[1] the efficacy of a curse depends not only upon the potency which it possesses from the beginning, but also upon the vehicle by which it is conducted—just as the strength of an electric shock depends not only on the original intensity of the current, but also on the condition of the conductor. And of all conductors of curses none is considered more efficient than blood. The reason for this is that blood is supposed to contain supernatural energy, and it is a general law of magic that a medium endowed with supernatural energy gives particular potency to any curse with which it is loaded. In Morocco blood which has been shed is always supposed to contain *žnûn*, or evil spirits; there is misfortune in it—*l-bās yimši m'a ddem*. The most awful of all *'âr*-sacrifices is the so-called *t'arḳība* or *t'argība*. The sinews of the knee-joints (*l-'aráḳab*, or *l-'arâgeb*) of a bullock's hind-legs are cut, and in this state the animal is taken to him or those to whose loss the *'âr*-sacrifice

[1] *Origin and Development of the Moral Ideas*, i. 586.

is to be made. This is done on very solemn occasions only, when one tribe invokes another or when somebody makes an appeal to the Sultan or to some high government official. The reason for cutting the sinews of the bullock seems to be to give the animal the appearance of a suppliant.

As a means by which one person can compel another to comply with his wishes, *l-'âr* naturally plays a very important part in the social life of the people. It is resorted to for a variety of purposes: to obtain pardon from the government; or to induce the relatives of a person who has been killed to abstain from taking revenge; or to secure assistance against an enemy or mediation in the case of trouble. A woman once wanted to put *'âr* upon me outside my tent in order to compel me to give a new cloak to her little son. *L-'âr* is thus a great boon to weak and helpless people, criminals, and strangers. The fact that a person is in the *'âr* of the owner of a dwelling as soon as he has entered or even touched it, largely explains the stringent claims of hospitality; for, by being in his dwelling, the stranger is in close contact with the host and his belongings and is consequently able to transmit to them any evil wishes he pleases. In the Great Atlas mountains a Jew who settles down in a Berber village always places himself under the protection of some powerful man by putting *'âr* upon him. *L'âr* makes travelling possible in districts which otherwise would be inaccessible even to Mohammedan strangers. For instance, if a man belonging to the Arabic-speaking Bĕni Ãḥ'sen tribe goes to visit the neighbouring Berber tribe, Zémmur, or a Zémmur man goes to visit Bĕni Ãḥ'sen, the visitor must secure protection (*l-mézrag*) from some member of the other tribe. In case the protector should desert his protégé, the injured party, or, if he has been killed, his relatives, make a picture of the faithless man and take it about from market to market telling the people which person it represents and at the same time cursing him. This is done for the purpose of compelling him to pay compensation; and should he refuse to do so a fight may ensue between the families of the two parties. Or the injured person threatens to dig the other's grave in the market place, and if his threat is of no avail he carries it out, announcing, 'So-and-so has broken his word, this is his grave,' in which case the person in question is regarded as a dishonoured man. A similar system prevails among the Jbâla, or mountaineers of the North, and the Shluḥ, or Berbers of the South, in districts where the Sultan's rule is merely

nominal; the Jbâla call such protection *zzéṭṭaṭ*. The degree of protection which *l-ʿâr* affords to him who resorts to it depends, of course, upon the respect in which the protector is held. The protection given by women is particularly powerful. In various tribes of Morocco, especially among the Berbers and Jbâla, a person who takes refuge with a woman by touching her is safe from his pursuer; whilst among the Arabs of the plains this custom is dying out, probably owing to their subjection under the Sultan's government. The reason why women are regarded as able to offer an asylum is obviously the belief in their magic power and the great efficacy of their curses.[1]

I have so far dealt with *l-ʿâr* as practised in the relations between man and man. But it is equally often resorted to as a means of putting pressure upon supernatural beings, *žnûn* and dead saints.

The *žnûn* (*djinn*) form a special race of beings, created before Adam. They have no fixed forms, but may assume almost any shape they like. They may be met with anywhere, but certain places are specially haunted. Some of them are good, others bad, but the latter hold a much more prominent place in the popular creed. They are always ready to attack human beings; hence various means are used for keeping them at a distance or appeasing them,[2] and one of these means is *l-ʿâr*.

As every place has its *žnûn*, the Moors, whenever they build a house or pitch a new tent or dig a well, make a sacrifice to the spirit owners of the place, *mwâlin l-mkân*; and this sacrifice is generally described as *ʿâr*, although the meat of the slaughtered animal is eaten by the people themselves. The killing of the victim takes place at the entrance of the tent or on the threshold of the new house, or on the spot where the threshold will be built; and in many or most parts of Morocco an animal is slaughtered not only when the foundation of the house is laid but also when it is ready, or nearly ready, for occupation. So also when a well is being dug a sacrifice may be offered not only at the commencement of the work but also afterwards, when the water first appears, or when the well is ready. The Berbers of Aglu slaughter a black goat at the place where the well is to be dug, saying some words like these:—*Nǧărs fill'aun alĕmluk wamanad afillaǧtăr'ḫum năr'ḫo fill'aun adaǧort'árḍĕm krän*

[1] See my *Origin and Development of the Moral Ideas*, i. 666 sqq.

[2] See my article, 'The Nature of the Arab Ǧinn illustrated by the Present Beliefs of the People of Morocco,' in *Jour. Anthr. Inst.*, xxix. 252 sqq.

tǧausa nafillaǧ išḳḳan, 'We killed for you, O masters of this water, may you make it easy for us, we shall make it easy for you, may you not cause us any difficulty.' In Andjra a black goat is killed and thrown into the stream on the spot where a new millstone is going to be placed; this, too, is *'âr* for the *žnûn*. Very commonly *'âr*-sacrifices are offered to the *žnûn* in cases of illness. Sudden disturbances of the health, such as convulsions, epileptic and paralytic fits, rheumatic or neuralgic pains, are said to be caused by these spirits; and a common remedy is to kill a cock on the spot where the patient is supposed to have been struck, or to kill a cock over his head and then take it to a place haunted by *žnûn*. In either case the sacrifice of the cock is regarded as *'âr*.

Of considerable interest is the *'âr* made for dead saints. Under the name of dead saints I include not only deceased men or women who were supposed to be endowed with *baraka*, holiness, already during their lifetime, but also those purely imaginative beings who have been invented to give an anthropomorphic interpretation of the holiness ascribed to certain places or objects of nature. Moorish saints may be divided into two classes—such as really exist or have existed in human shape, and such as have never existed at all. Language itself indicates a certain confusion between a holy person and a holy place. The name *sîyid* (pl. *sâdāt*[a]) is given both to a saint and to the place where a saint has, or is supposed to have, his tomb or where such a person is said to have sat or camped. It is always marked in some way or another: by a white-washed house, or a room without a roof, or a low enclosure of stones, or merely a cairn. Such a place—and Morocco is crowded with places of this description—is visited by persons who desire to invoke the saint to whom it is dedicated, with a view to being cured from some illness, or being blessed with children, or getting a suitable husband or wife, or receiving help against an enemy, or deriving some other benefit from the saint. To secure his assistance the visitor puts *'âr* upon him; and here again different methods may be adopted.

The *'âr* made on a saint may consist in throwing stones on a cairn connected with the *sîyid*. As already said, a cairn may itself be a *sîyid*, and very frequently cairns are found in the immediate vicinity of *sâdāt*[a]. Moreover, there are cairns on the roadside, especially on the tops of hills, at the place where a *sîyid* first becomes visible to the traveller. The Arabs of the plains call a cairn of

this sort *l-kârkōr dyâl rrāgûba*, the Jbâla call it *rrauḍa* (or *rruîḍa*) *fiššfaḳ*. Passers-by throw some stones on it, thereby placing themselves under the *'âr* or protection of the saint; in Andjra it is the custom to throw three stones, which are first kissed by him who throws them. But a person may also, with the face turned towards the *sîyid*, ask for the fulfilment of some special wish, and in this case, at least in Andjra, the petitioner kisses the cairn. At the sanctuaries of saints, or at the place from which a *sîyid* becomes visible, I have frequently, especially among the Shluḥ of the Great Atlas, seen small piles consisting of a few stones one put on the top of another. These piles are *'âr* on the saint, made by sick persons or other petitioners, who generally at the same time promise to offer him a sacrifice if their wish is granted. When the petitioner finds that the saint has listened to his request, he fulfils his promise and knocks down the pile; whereas, if the saint gives no assistance, the pile is left as *'âr* on him.

In all parts of Morocco it is common to tie rags to objects belonging to a *sîyid*—to the window-rails of a saint's house, to some tree growing on a saintly spot, or to a stake thrust in the cairn of a saint, or to the cairn itself. In very many cases at least, the tying of rags is *'âr* upon the saint. In the Great Atlas I visited a place where the great saint Mulai 'Abd-ŭl-Ḳâder has a heap of stones dedicated to him. A large number of rags were tied to a pole stuck in the cairn, and when I asked for an explanation, the answer was that the petitioner generally fastens a strip of his clothes to the pole muttering some words like these:—*A yagŭrrâmad, háyyi usîǧăk urdiǧ adakzduǧ ard itaḳḍut taġausânu*, 'O saint, behold! I promised thee an offering, and I will not release (literally 'open') thee until thou attendest to my business.' If his wish is fulfilled the person goes back to the place, offers the sacrifice which he promised, and unties the knot which he made. Among the Ulád Bu 'Azîz a petitioner may go to the tomb of a saint and tie his turban round one of the corners of the box (*ṭṭābût*) under which the saint lies buried, and the turban is left there for a night as *'âr* on the saint. A Berber servant of mine from Aglu in Sûs told me that once when he was in prison he invoked Lálla Răḥ'ma Yusf, a great female saint whose tomb is in a neighbouring district, and tied his turban, saying, 'I am tying thee, Lálla Răḥ'ma Yusf, and I am not going to open the knot till thou hast helped me, nor shall I ever invoke thee if thou dost not assist me.' And the same night his chains were opened by her and he

escaped; the saint was evidently frightened by his threat. Very often petitioners knot the leaves of some palmetto or the stalks of white broom growing in the vicinity of a *sîyid*. This is practised all over the country, and a common rule is that the tying should be done with the left hand. At Sîdi Tálḥa's sanctuary in Andjra seven knots are made on the leaves of a palmetto; and the same is the case at the tomb of the patron saint of Tangier, Sîdi Muḥámmed l-ḥadj, where the seven knots should be made one after the other and without difficulty, as it is believed that he or she—this is mostly done by women—whose hand gets too tired to finish the knots properly will not have the request granted. So also a native of the tribe Massa in Sûs, when in distress, will go to the tomb of Lálla Rāḥ'ma Yusf, and knot the leaf of some palmetto growing near her grave, saying, *Kĕr'fġkĕm ġid alálla rāḥ'ma yusf, urriġ adámfsiġ ġâr iġiyí tfsit ġtässästad lli ġilliġ*, 'I tied thee here, O Lálla Rāḥ'ma Yusf, and I shall not release thee unless thou releasest me from the toils in which I am at present.'[1]

However, the practices of throwing stones at the cairns of saints, of making piles of stones to saints, of tying pieces of clothes at *sâdāt*ˢ, and of knotting the leaves of palmettos or white broom, may have another object besides being *'âr* on a saint. When performed by persons who are suffering from some illness, the idea of disease-transference is often conspicuously present in their minds. Outside the famous Imi ntaḳḳándut in Ḥáḥa (Southern Morocco), which consists of two huge caves supposed to be inhabited by saintly *žnûn*, there are innumerable small piles of stones made by visitors evidently with a view to transferring their diseases to the stones. Before piling up the stones they rub them against the affected part of the body, and it is generally assumed that if anybody happens to overthrow one of these piles he will catch the disease of its maker. In Andjra, at least, the belief prevails that if a person rids himself of a disease by tying some piece of his clothes at a *sîyid*, the disease would be transferred to anybody who afterwards appropriated the

[1] These facts have suggested to me an explanation of the Latin word *religio*, religion, which is probably related to *religare*, which means 'to tie'. It is commonly assumed that the relationship between the words implies that in religion man was supposed to be tied by his god. But I venture to believe that the connexion between *religio* and *religare* allows of another and more natural interpretation, namely, that it was not the man who was tied by the god, but the god who was tied by the man. The Romans were much more addicted to magic than to true religion; they wanted to compel their gods rather than to be compelled by them.

strip. Among the Berbers of Ait Zĕl'ḍn, in Ḥáḥa, sick people used to visit a miracle-working wild olive-tree growing in the immediate neighbourhood of the supposed grave of Sîdi Butlîla ('my lord the master of relief'). They there rid themselves of their complaints by tying a woollen string to one of its branches; in cases of headache the patient previously winds the string three times round the top of his head, whilst in case of fever he spits on the string, and when tying it to the tree says, *Fîlâǧ gik taulânu ayazĕmmûrad*, 'I left my fever in thee, O wild olive-tree.' He believes that he may in this manner transfer his disease to this particular tree because there is *baraka*, 'benign virtue,' in it; he would not expect to be cured by tying the string to any ordinary tree. The transference of evil is not looked upon as a merely 'natural' process; it can hardly be accomplished without the aid of magic energy; hence acts calculated to bring about such transference are performed by contact with some holy object. The making of knots may serve a similar purpose. Near Mehdiah, on the Atlantic coast of Morocco, I found at the road-side bushes of white broom with the tips of their stalks twisted into knots, and I was told by two shepherd boys who happened to be on the spot, that when a person is suffering from backache he makes such a knot with his hands behind his back. But whilst acts of this kind imply disease-transference, they may very well at the same time be *'âr* for a saint. We should remember that *l-'âr* itself is an act of transference—the transference of a conditional curse.

A fusion of different ideas may also be found in some other methods of making *'âr* upon saints. If a person goes to a *sîyid* to invoke the saint's revenge upon an enemy, he sometimes takes with him some burned corn and strews it on the floor of the sanctuary, saying, *Šétt*et*, *ya sîdi, flân kâma' šétt*et* had šše'r fik*, 'I threw, O saint, So-and-so as I threw this corn.' This is *'âr* on the saint, but at the same time it is an act of symbolic magic. For a similar purpose supplicants burn tar inside a *sîyid*, or, if the door be closed, outside the entrance, maintaining that they are thus burning the enemy. Again, if a person has been falsely accused, he turns over the carpet in the *sîyid* which he visits, asking God to turn a still greater accusation over the false accuser. Another method of calling down misfortune upon an enemy is to sweep the floor of the *sîyid* with one's cloak, praying God to sweep the enemy likewise. It may be that in these acts symbolic magic predominates, but they are all called *l-'âr*, and are considered to compel the saint to give his assistance.

As in the case of *l-'âr* made on living men, so also *l-'âr* made on departed saints, or at *sâdât* generally, very frequently consists of an animal sacrifice. This *'âr*-sacrifice is accompanied by a promise to reward the saint if he grants the request; the Moors are too shrewd to give a present before they know that they gain by it. The reward given in fulfilment of such a promise is called *l-wâ'da*. It may itself consist in a sacrifice, but one totally distinct from that offered as *'âr*. Whilst the *'âr*-sacrifice is a means of constraining the saint, the *wâ'da*-sacrifice is a genuine gift. An animal which is offered as *'âr* to a saint is killed without the usual phrase *bismilláh*, 'In the name of God'; and it may not be eaten, except by poor people. However, if the *sîyid* has a *mḳáddām*, or regular attendant, he tries to induce the petitioner to give him the victim alive, so that he may himself kill it 'in the name of God', and thus make it eatable. Then the descendants of the saint (if he has any) and the *mḳáddām* himself have no hesitation in eating the animal, even though it was intended by the visitor as *'âr* on the saint; *bismilláh* is a holy word which removes the curse or evil energy inherent in *l-'âr*. On the other hand, the animal which is sacrificed as *wâ'da* is always killed 'in the name of God', and it is offered for the very purpose of being eaten by the saint's earthly representatives. Nothing can better show than the Moorish distinction between *l-'âr* and *l-wâ'da* how futile it would be to try to explain every kind of sacrifice by one and the same principle. The distinction between them is absolutely fundamental. The former is a threat, the latter is a promised reward.

From the words which are uttered when *l-'âr* is made on a saint, it is obvious that in such cases, also, *l-'âr* implies a conditional curse. When I have asked how it is that a saint, although invoked with *l-'âr*, does not grant the request made to him, the answer has been that the saint does all that he can, but that he is not all-powerful and the failure is due to the fact that God does not listen to his prayer. But it also occurs that a person who has in vain made *'âr* on a saint goes to another *sîyid* to complain of him. There is a general belief that saints do not help unless *'âr* is made on them—an idea which is not very flattering to their character.

As a person is placed under another person's protection by coming in contact with his dwelling, so also anybody who takes refuge to a *sîyid* is in the *'âr* of the saint. As a refugee may, by his curse, compel a living man, so he may in a similar manner constrain a saint as soon as he has entered his sanctuary. The right of sanc-

tuary is regarded as very sacred in Morocco, especially in those parts of the country where the Sultan's government has no power. To violate it is an outrage which the saint is sure to punish. In a village in Ġarbîya I saw a madman whose insanity was attributed to the fact that he once had forcibly removed a fugitive from a saint's tomb; and of the late Grand-Vizier it is said that he was killed by two powerful saints of Dukkâla, on whose refugees he had laid violent hands. Even the descendants of the saint or his *mḳáddām* can only by persuasion and by promising to mediate between the suppliant and his pursuer induce the former to leave the place. This shows how anxious the saint is to protect his refugees. He must protect them because they are in his *ʿâr*.

Closely connected with *l-ʿâr* is *l-ʿâhăd*, or covenant. Whilst *l-ʿâr* is one-sided, *l-ʿâhăd* is mutual; both parties transfer conditional curses to one another. And here again the transference requires a material conductor. In times of rebellion chiefs exchange their cloaks (*sslâhăm*) or turbans, and it is believed that if any of them should break their covenant he would be punished with some grave misfortune. This practice I found prevalent both among the Arabs of the plains and the Berbers (Bråber) of Central Morocco. Among the Ulád Bu ʿAzîz it is a common custom for persons who wish to be reconciled after a quarrel to go to a holy man and in his presence join their right hands so that the fingers of the one go between the fingers of the other, after which the saint throws his cloak over the united hands, saying, *Hâd l-ʿâhăd bînâtkum*, 'This is *ʿâhăd* between you.' Or they may in a similar manner join their hands at a saint's tomb over the head of the box under which the saint is buried, or they may perform the same ceremony simply in the presence of some friends. In either case the joining of hands is usually accompanied by a common meal, and frequently the hands are joined over the dish after eating. When joining the hands they say, *Hâda ʿâhădlláh bîni u bînĕk*, 'This is *ʿâhăd* of God between me and you.' And if a person who has thus made a compact with another is afterwards guilty of a breach of faith, it is said of him, *Răbb'i u ṭṭʿâm iḫállăṣ*, 'God and the food will repay (him)'; in other words, the conditional curse embodied in the food which he ate will be realized. Similar forms of *l-ʿâhăd* are practised among the Berbers of the Great Atlas and Sûs; and all over Morocco the usual method of sealing a compact of friendship is by eating together, especially at the tomb of some saint. The sacredness of the place adds to the efficacy of the

imprecation, but its vehicle, the real punisher, is the eaten food, because it contains a conditional curse. The Ulád Bu ʿAzîz say that it is more important to be kind to a neighbour than to a relative, because neighbours so often take their meals together.

The *ʿâhăd* of the Moors helps us to understand the covenant sacrifice of the ancient Semites. The only difference between them seems to be that the former is a method of establishing a compact between men and men, whilst the latter established a compact between men and their God. That the idea of transferring a curse by means of a sacrifice was familiar to the ancient Arabs is obvious from the custom of throwing the hair of a sacrificial victim on a holy tree as a curse;[1] and in the covenant sacrifice the curse was mutual. They sealed covenants by applying sacrificial blood to the sacred stone representing the deity, and the worshippers, on their part, dipping their hands in it.[2] In the covenant ceremony at Mount Sinai half of the blood of the sacrificed oxen was sprinkled on the altar and the other half on the people.[3] Among the Hebrews, as in Morocco, covenants were further made by the parties eating together; and this was also the case with covenants made with the deity.[4] In the light of the Moorish *ʿâhăd* the meaning of this sacrificial meal seems clear. There is no foundation for the theory laid down by Robertson Smith and his followers that it is a survival of a previous custom, according to which the god—that is, the totem god—himself was eaten, and that it was a sacrament in which the whole kin, the god with his clansmen, united, and in partaking of which each member renewed his union with the god and with the rest of the clan. The object of a sacrificial meal may be to transfer blessings to worshippers; for, by being offered to a god, the victim becomes instinct with beneficial supernatural energy, which by eating is transferred to those who partake of the meal.[5] But when the purpose of the sacrificial meal is to establish a covenant, the idea underlying it is not to transfer blessings to the worshippers, but to transfer conditional curses both to the worshippers and to their god.

[1] Wellhausen, *op. cit.*, p. 124. So little has the true import of such sacrifices been understood, that Wellhausen represents the one in question as a gift to the deity.

[2] Robertson Smith, *Religion of the Semites*, p. 314; Wellhausen, *op. cit.*, p. 125.

[3] *Exodus*, xxiv. 4 sqq.

[4] Robertson Smith, *op. cit.*, p. 271; Wellhausen, *op. cit.*, p. 124.

[5] See my *Origin and Development of the Moral Ideas*, i. 445 sq.



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A BIBLIOGRAPHY OF
EDWARD BURNETT TYLOR
FROM 1861 TO 1907

COMPILED BY BARBARA W. FREIRE-MARRECO
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The following abbreviations are employed:—

Acad. = Academy.
B. = Bodleian Library Catalogue.
B.M. = British Museum Catalogue.
Brit. Ass. R. = Report of the British Association for the Advancement of Science
Fortn. Rev. = Fortnightly Review.
Journ. = Journal.
Journ. Anth. Inst. = Journal of the Anthropological Institute.
Mag. = Magazine.
Pop. Sci. Mo. = Popular Science Monthly.
Proc. Royal Inst. = Proceedings of the Royal Institution.
Quart. Rev. = Quarterly Review.
Rev. = Review.
Trans. = Transactions.
Trans. Ethn. Soc. = Transactions of the Ethnological Society.
Univ. Gaz. = Oxford University Gazette.

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1864. (4) **Discovery of a Celtic Kitchen-Refuse-Heap at Normanby in Cleveland.** (*Anon.*)
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——— *same lecture*, Taunton College School, March 14, 1872.

Nature, 6: 6–7.

(38) *Six Lectures on* **The Development of Belief and Custom among the Lower Races of Mankind.** Royal Institution, April–June, 1872.

(39) *Lecture:* **The Survival of Savage Thought in Modern Life.** Literary and Philosophical Association, Bath, December 6, 1872.

Bath Pamphlets, *in* Shum's Collection of Bath Books (forthcoming), vol. 40: Art. 11.

Bath Chronicle, December 12, 1872. p. 3.

('Survivals'; evolution of arts—musical bow, fire-drill, Need-fire—social position of the aged among savages—killing of aged in Brazil, Sweden, England, Silesia, Saxony; Village Community—game-laws—land tenure. Survivals in religious observances—dancing—funeral ceremonies.)

(40) Report of the Arctic Committee of the Anthropological Institute: II. Enquiries as to Religion, Mythology and Sociology of Esquimaux Tribes.

Journ. Anth. Inst., 2: 297.

1873. (41) PRIMITIVE CULTURE: RESEARCHES INTO THE DEVELOPMENT OF MYTHOLOGY, PHILOSOPHY, RELIGION, LANGUAGE, ART, AND CUSTOM.

2nd edition. 2 vols. London: Murray, 1873. 8vo, viii + 502 and viii + 470.

Prefaces 1871 and 1873.

(42) Die Anfänge der Cultur; Untersuchungen über die Entwicklung der Mythologie, Philosophie, Religion, Kunst und Sitte. Unter Mitwirkung des Verfassers ins Deutsche übertragen von J. W. Spengel und Fr. Poske.

2 vols. Leipzig: Winter. 1873. 8vo. xii + 495 and iv + 472.

Preface 1871 translated; translator's preface to German edition, September, 1872.

(43) **Primitive Society:** arts. 1 and 2.

Contemporary Review, 21: 701–718 (April, 1873); 22: 53–72 (June). Eclectic Magazine, N. S., 17: 641–652; 19: 722–740. Translated, Znanie (St. Petersburg), 1873.

(1. Moral condition of savages; treatment of aged; force of custom; marriage-prohibitions; savage morals under favourable conditions; origin of moral standard—religion and future life—'independent morality'; kinship, the

family, blood-covenant, common meal; homicide, head-hunting; theft; utilitarianism.

2. Blood-revenge in Australia, South America, Europe; substitution of law; lex talionis in Abyssinia; vengeance on criminal's family; family responsibility; evolution of idea of legal punishment. Primitive land-law; agriculture—digging-stick; Village Community, disintegration under modern conditions. Effects of war on society—patriarchal government superseded by elective chiefship; slavery. Evolution of Society.)

1873. (44) *Review of* Clodd's The Childhood of the World: London, 1873.
Nature, 8: 99–100.

(45) *Review of* Herbert Spencer's Descriptive Sociology, No. I; English: Collier; London, 1873.
Nature, 8: 544–547.
(Merits of Mr. Spencer's scheme.)

(46) *Review of* Marshall's A Phrenologist among the Todas: London, 1873.
Nature, 9: 99–101.
(Morality; Toda marriage; phrenology; infanticide.)

(47) **English Dictionaries:** *Review of* A Dictionary of the English Language; Latham: London, 1866–70; and other works. (*Anon.*)
Quart. Rev., 135: 445–481 (October, 1873).

(48) ——— *letter on same subject.* Athenaeum, Nov. 22, 1873.

(49) *Lecture:* **The Primitive Social Condition of Man.** Leeds Philosophical and Literary Society, February 4, 1873.
Reports Leeds Phil. and Lit. Soc., 1872–3 (*title only*).

(50) **On the Relation of Morality to Religion in the Early Stages of Civilization.** British Association, Bradford, 1873; Department of Anthropology.
Brit. Ass. R., 148–150. Nature, 8: 498–499.
(Growth of ethical religions; marriage; wife-purchase, &c.; disease-spirits; exorcism; manes-worship; future life; great deities.)

(51) **Refraction of Light Mechanically Illustrated:** questions arising out of a lecture at Taunton College School.
Nature, 9: 158–159.

1873} (52) Report of the Committee on the preparation of brief forms of
1874} instructions for travellers, ethnologists, &c. British Association, Bradford, 1873.
Brit. Ass. R., 482–488.
——— Belfast, 1874.
Brit. Ass. R., 214–218.

1874. (53) PRIMITIVE CULTURE: RESEARCHES INTO THE DEVELOPMENT OF MYTHOLOGY, PHILOSOPHY, RELIGION, LANGUAGE, ART, AND CUSTOM.
1st American, from the 2nd English edition. 2 vols. New York: Henry Holt and Company. 1874. 8vo. viii + 502 and viii + 470.
Prefaces 1871 and 1873.

1874. (54) **The Stone Age, past and present**: *in* Half-hour Recreations in Popular Science, Series I. D. C. Estes. 1874, &c. 8vo. pp. 327–362. B.M. [8708. bbb. 4].

(Stone Age defined, p. 327; use of natural stones, 328. Unground Stone Age, 329; Drift or Quaternary deposits; geological time; characteristic drift implements; comparison with modern and undated implements. Bone Caves, 332; shell-heaps; state of civilization represented.

Ground Stone Age, 334; characteristics; celts, hammers, spears; stone implements as evidence of intercourse—polished celts of green jade in Australia, 337; mére in New Zealand, similar weapon in Peru, 338; world-wide uniformity of certain types.

Races without knowledge of metals; Stone Age in America; copper, gold, silver, bronze; legends of foreign teachers; Asia, 343. Stone Age in Asia, 344-349; in Europe, 349; linguistic evidence, 350; Semitic evidence, ceremonial uses, circumcision, embalming, blood-covenant, 351-355. Africa: use of iron, 355; Stone Age, 356, 357; thunder-bolt myth, 357-361; Conclusion.)

(55) *Sections in* Notes and Queries on Anthropology, for the use of Travellers and Residents in uncivilized lands. Drawn up by a Committee appointed by the British Association for the Advancement of Science.

London: Stanford. 1874.

xviii. History, 27-28. xx. Etymology, 36-37. xxii. Arithmetic, 38-39. xxviii. Morals, 47-48. xxix. Covenants, Oaths, Ordeals, 49. xxx. Religion, Fetishes, &c., 50-58. xxxi. Superstitions, 59. xxxii. Magic and Witchcraft, 60-61. xxxiii. Mythology, 62-63. xxxvi. Customs, 66-67. xxxvii. Taboo, 67-69. lxix. Language, 114-116. lxx. Poetry, 117. lxxi. Writing, 117-118. lxxvii. Fire, 125. xci. Conservatism, 137. xcii. Variation, 137-138. xciii. Invention, 138.

See (197), (236).

(56) **The Relation of Race to Species.**

Nature, 11: 129. Illustration.

See (35).

(Diagrammatic representation of effects of variation; crossing of Europeans and negroes; development of a species.)

(57) **The Philology of Slang.**

Macmillan's Magazine, 29: 503–513 (April, 1874). Eclectic Mag., N. S., 19: 722–732.

(Slang a genuine and influential branch of speech; principles of formation exemplified—onomatopoëic words—abbreviation and contraction—agglutination—variation of internal vowels—metaphor, puns—antiquarian slang—foreign sources.)

(58) *Review of* Fritsch's Die Eingeborenen Süd-Afrikas: Breslau, 1872.

Nature, 9: 479–482.

(Racial types; language.)

(59) *Review of* Peschel's Völkerkunde: Leipzig, 1874.

Acad., 5: 665.

(American culture borrowed.)

(60) *Review of* Herbert Spencer's Descriptive Sociology: No. 2. Ancient Mexicans, Central Americans, Chibchas, and Ancient Peruvians:

Scheppig. No. 3. Types of Lowest Races, Negritto Races, and Malayo-Polynesian Races: Duncan. London, 1874.
Acad., 6: 298.
(American and Asiatic calendars.)

1874. (61) *Review of* Catalogue of the Anthropological Collection lent by Colonel Lane Fox for Exhibition in the Bethnal Green Branch of the South Kensington Museum: Lane Fox; London, 1874.
Acad., 6: 460.
(Shields; boomerangs; spear-throwers; bow; blow-gun; single or multiple origin of inventions.)

(62) **The Degeneracy of Man**: *Letter on* Peschel's Völkerkunde, p. 137.
Nature, 10: 146–147, 205.
(Von Martius on degeneracy of Brazilian Indians; Brazilian land-law; Polynesian numerals as evidence of degeneracy.)

(63) *Lecture*: **Light.** Wellington Literary Institute, March 3, 1874.
Wellington Weekly News, March 5, 1874.

1875. (64) *Article* **Anthropology.**
Encyclopaedia Britannica, ninth edition, 2: 107–123.
(Man's Place in Nature—Origin of Man—Races of Mankind—Antiquity of Man—Language—Development of Civilization; survival in culture.)

(65) *Review of* Bancroft's Native Races of the Pacific States, vol. i: London, 1875.
Acad., 7: 428–429.
(Eskimo: Asiatic migrations.)

(66) *Review of* Gerland's Anthropologische Beiträge: Halle, 1875.
Acad., 8: 555–556.
(Food and the origin of civilization; fixity of race types.)

(67) *Letter on* **Orientation.**
Times, July 15, 1875, p. 7.
(Survivals in Christian ritual.)

(68) *Lecture*: **Primitive Civilization.** Leeds Philosophical and Literary Society.

1876. (69) La Civilisation Primitive: traduit de l'anglais sur la deuxième édition par M^me^ Pauline Brunet.
2 vols. Paris: Reinwald et Cie. 1876. 8vo. xvi + 584 and viii + 597.
Prefaces 1871 and 1873.

—— (70) *Article* **Cannibalism.**
Encyclopaedia Britannica, ninth edition, 4: 807–809.
(Etymology; natural aversion to cannibalism; causes of cannibalism—famine—fury or bravado—morbid affection—magic—religion—habit; prehistoric evidence.)

—— (71) *Article* **Demonology.**
Encyclopaedia Britannica, ninth edition, 7: 60–64.
(Etymology—Demon modified human soul; animistic theory of disease; possession; phantoms; guardian spirits; sorcerers, witches, familiar spirits; spiritualistic séances—Hierarchy of spirits; dualism; degradation of deities of hostile religions.)

1876 (72) *Article* **Divination.**
Encyclopaedia Britannica, ninth edition, 7: 38–54.
Etymology—Artificial divination: necromancy, prodigies, lightning, augury, astrology, the connection of these: animism—Natural Divination: dreams; prophetic oracles.

(73) **South-Sea Island Mythology**: *Review of* Gill's Myths and Songs from the South Pacific: London, 1876: and other works.*
Quart. Rev., 142: 322–351. July, 1876.
*Polynesian Mythology: Grey. London, 1855. *Ko Hau o Maui*: Taylor; 2nd edit., London, 1870. *Traditions and Superstitions of the New Zealanders*: Shortland: 2nd edit., London, 1856. *Die Wunderwaqen der Neuseeländer*: Schirren; Riga, 1856.
Hervey Islands: sea-faring migration from Asia into Polynesia; *Avaiki* = West.

(74) **Daumann's Race Photographs**: *Review of* Daumann's Ethnological Photographic Gallery: new edition: London, 1875.
Nature, 13: 134–135.

(75) *Review of* Wilson's Prehistoric Man: new edition: London, 1876.
Nature, 14: 45–46.
Metal-working: Americanising of European types.

(76) **Remarks on Japanese Mythology.** Anthropological Institute. March 28, 1876.
Journ. Anth. Inst., 6: 55–57.
(Buddhist and Chinese influence: Japanese nature-myths: *go-hei* in mythology. *In discussion*:—story of hero set adrift—fairy food: mirror in Japanese temples.

(77) *Review of* von Hellwald's Culturgeschichte: Augsburg, 1875.
Acad., 9: 198–199.
(Variation of human mind: couvade not connected with patrilineal descent.)

(78) *Review of* Bancroft's The Native Races of the Pacific States, vols. ii–v: London, 1875–6.
Acad., 10: 192–194.
(Mexican and Central American calendars, rites, &c.; mound-builders; Asia and Mexico; confession of sins; Norse mythology in America; Mexican Deluge (Coxcox).)

(79) *Review of* Hartmann's Die Nigritier, part I: Berlin, 1876.
Acad., 10: 629–630.
(Fellahs as representatives of ancient Egyptians; relation of Berbers; origin of Egyptians; African migration into Europe.)

(80) *Lecture*: **Ordeals and Oaths.** Royal Institution, April 7, 1876.
Proc. Royal Inst., 8: 152–166. Times, April 10, 1876.

(81) ——— Macmillan's Mag., 34: 1–11. Pop. Sci. Mo., 9: 307. Living Age, 130: 220. Eclectic Mag., N. S., 24: 59.
(Origin of ordeals and oaths—magic and religion. *Ordeal*—magical basis; religious element imported; salt, shell-fish, water-trembling, weighing, Bible-and-key, water, fire, poison, hot iron, food. *Oath*, nature of; oaths by sun, head, weapon; symbolic reversal; animal worship; 'oath of conditional favour'; nature of penalties; mundane and post-mundane oaths, lower and

higher culture; compound nature of English judicial oath—'halidome'—'so help me God'; administration to children; social value of oath; truth.)

—1877. (82) *Article* **Eunuch.**
Encyclopaedia Britannica, ninth edition, 8: 667.
(Oriental; ancient; modern; ascetic.)

(83) **Sound Vibrations of Soap-Film Membranes.**
Nature, 16: 12.

(84) **Mr. Spencer's 'Principles of Sociology':** *Review of* Herbert Spencer's The Principles of Sociology, vol. i; London, 1876.
Mind, 2: 141–156 (April 1877).
(Mr. Spencer's treatment of the evolution of religion, and Tylor's theory of Primitive Animism; mental condition of primitive man; fetishism; belief in soul; future life, land of souls, Hades, the West, Heaven; belief in spirits; demon modified soul; disease; sacrifice; animal-worship, names of ancestors; polytheistic gods; euhemerism; hypothesis of verbal misunderstandings.)

(85) ——— *Letter*, May 2, 1877.
Acad., 11: 392.
Answer to Mr. Spencer's letter of April 23; Acad., 11: 367.
(Animism; date of publication of *Philosophy of Religion* (see 28) and writing of *Primitive Culture*.)

(86) ——— *Letter*, May 19, 1877.
Acad., 11: 462 (May 26).
Answer to Mr. Spencer's letters of April 23 and May 7; Acad., 11: 367, 416.
(Theory of Animism brought before Ethnological Society in its complete elaboration, 1870. *See* 28.)

(87) ——— *Letter*, May 28, 1877.
Mind, 2: 419–423 (July).
Answer to Mr. Spencer's letter of April 19; Mind, 2: 415–419.
(Relation of Spencer's views to Tylor's; origin of Animism.)

(88) ——— *Letters*, June 13, 19.
Mind, 2: 429.
Answer to Mr. Spencer's letter of June 2.

(89) *Review of* Squier's Peru: London, 1877.
Nature, 16: 191, 192.
(Stone circles; round towers; traditions of the Incas.)

(90) **The Cagots and Gypsies of France and Spain:** *Review of* de Rochas' Les Parias de France et d'Espagne; Paris, 1876.
Acad., 11: 392–393.
(Cagots not heretics but lepers.)

(91) **'The Child', by Ploss:** *Review of* Ploss' Das Kind in Brauch und Sitte der Völker; Stuttgart, 1876.
Acad., 12: 473–4, 495–6. Pop. Sci. Mo., Suppl., 9: 240–243 (1878).
(Survivals in treatment of infants; purification of women; sanitary origin of ceremonies; skull-deformation; infanticide; couvade, sympathetic magic.)

(92) *Two Lectures*: **The Philosophy of Language.** London Institution, January 22, 29, 1877.
Times, January 23 (p. 5), 30 (p. 6), 1877.

1877. (93) *Lecture*: **Language in its Lower Forms.** Somersetshire Archaeological and Natural History Society, March 22, 1877.
Wellington Weekly News, March 29, 1877.

1878. (94) RESEARCHES INTO THE EARLY HISTORY OF MANKIND AND THE DEVELOPMENT OF CIVILIZATION.
3rd edition, revised. London: Murray. 1878. 8vo. iv + 388.
B.M. [2024. b.].

(95) ——— New York: Henry Holt & Company. 1878.

(96) **Backgammon among the Aztecs.**
Macmillan's Mag., 39: 142–150 (December, 1878). Pop. Sci. Mo., 14: 491.
An expansion of (97).
(Combination of draughts and dice; history of backgammon-group in Old World—Roman, Greek, Persian, Arabian *tâb*, Indian *ayânaya*, *pachisi*. America; *patolli*; Asiatic influence on Mexican culture—calendar, bronze, junk theory. North America; Sonora *patole*; Iroquois Game of the Bowl, plum-stones or peach stones, deer-buttons; Algonquin *pugasaing*; Huron *jeu de plat*. Comparison of North American and Asiatic culture.)

(97) **On the Game of Patolli in Ancient Mexico and its probably Asiatic Origin.** Anthropological Institute, April 9, 1878.
Journ. Anth. Inst., 8: 116–131.
See (96) and (106).
(Backgammon—Arabic forms—*pachisi*; early accounts of *patolli*; Huron Game of the Bowl—Iroquois deer-button and peach-stone game; junk theory of Asiatic influence.)

(98) **A Folk Tale and Various Superstitions of the Hidatsa-Indians.**
Communicated by E. B. Tylor. Folklore Record, 1: 136–144.

(99) *Lecture*: **The Beginnings of Exact Knowledge.** Bath Literary and Philosophical Association, November 15, 1878.
Bath Pamphlets, *in* Shum's Collection of Bath Books (*forthcoming*), vol. 40: art. 27. Bath Chronicle, November 21, 1878; p. 7.
(Numeration and arithmetic; measures; calendar; geometry.)

1879. (100) *Article* **Giants.**
Encyclopaedia Britannica, ninth edition, 10: 571–572.
(Giant-legends; races of giants; theory of modern degeneracy; statistics; giant-myths accounted for.)

(101) **Recent American Anthropology**: *Review of* Bastian's Die Culturländer des alten Amerika; Berlin, 1878: Contributions to North American Ethnology, vol. i; Washington, 1878: Matthews' Ethnology and Philology of the Hidatsa Indians; Washington, 1878.
Acad., 15: 12–13.

(102) *Review of* The Native Tribes of South Australia: Adelaide, 1878.
Acad., 15: 88–9.

1879. (103) *Lecture*: **A Fortnight's Tour in Brittany.** Wellington Literary and Scientific Institute, January 3, 1879.
Wellington Weekly News, January 9, 1879.
(Stone monuments; journey of soul; All Souls' Day; wrestling; transmission of news; marriage-broker.)

(104) **Remarks on the Geographical Distribution of Games.** Anthropological Institute, March 11, 1879.
Journ. Anth. Inst., 9: 23–29.
(Draughts; kite-flying; cat's-cradle; Asiatic migrations; Asiatic and Polynesian mythologies.)

(105) *Lecture*: **The History of Games.** Royal Institution, March 14, 1879.
Proc. Royal Inst., 9: 125.

(106) ——— Fortn. Rev., N. S., 25: 735–747. Pop. Sci. Mo., 15: 225. Eclectic Mag., N. S., 30: 21–30.
See (96), (97), (103).
(Principles for determining migration or re-invention of games; kites; cat's-cradle—Antiquity of games—Hand-games; hot cockles; morra; odd and even—Ball play; ball dance; hostile ball-games; stick and ball; evolution of hockey—Sedentary games; games of chance; divination (*Primitive Culture*, ch. iii); backgammon group; *tâb*, *pachisi*, *patolli*, North-American gambling-games; chess-group—Irregular course of evolution.)

(107) **Address to the Department of Anthropology, British Association,** Sheffield, August 22, 1879.
Brit. Ass. R., 381–389.
Journ. Anth. Inst., 9: 235–246. Nature, 20: 413–417. Pop. Sci. Mo., 16: 145–157 (**Recent Anthropology**).
(Evidence of man's antiquity derived from race, language, and culture independent of geological evidence; Quaternary Man; 'primaeval' or 'primitive' as applied to civilization; ancient Egyptians, relation to Chaldaeans; priority of bronze over iron; iron in Egypt; Metal Age; comparative study of law and custom; marriage, inheritance; comparative mythology; myth as explanation of fact.)

(108) **Remarks on Australian Marriage Laws.** Anthropological Institute, December 9, 1879.
Journ. Anth. Inst., 9: 354.
(Criticism of Morgan; letters from L. Fison and J. Forrest.)

1880. (109) Letter of condolence on the death of Broca.
Bulletin de la Société d'Anthropologie de Paris, 3: 498–499.

(110) **Anniversary Address.** Anthropological Institute, January 27, 1880.
Journ. Anth. Inst., 9: 443–458. Nature, 21: 381.
(Anthropology a generation ago—Review of year's work; advance in somatology, philology, archaeology; recent works; papers read before the Institute; marriage by capture; Vedic religion; fetichism.)

(111) **On the Origin of the Plough and Wheel-Carriage.** Anthropological Institute, February 24, 1880.

1880. Journ. Anth. Inst., 10: 74–82; plates and woodcuts. Revue d'Anthropologie, 11: 718. Nature, 21: 459–460. Pop. Sci. Mo., 18: 448.
(Origin of agriculture; digging-stick; hoe; plough derived from hoe; development—Wheel-carriage derived from rollers; evolution of wheel; war-chariot; use of cattle.)

(112) ——— additional note on war-chariot.
Journ. Anth. Inst., 10: 128.

(113) ——— *letter* in answer to suggestion made by Miss Peacock.
Acad., 18: 347.

(114) *Lecture*: **Musical Tone.** Wellington Literary Institute, April 16, 1880.
Wellington Weekly News, April 22, 1880.

1881. (115) ANTHROPOLOGY: AN INTRODUCTION TO THE STUDY OF MAN AND CIVILIZATION.
London: Macmillan & Co. 1881. cr. 8vo. xv + 448.
Preface, February 1881; select bibliography; 78 illustrations.
B. [189. f. 207]. B.M. [2352. b. 23].
——— New York: Appleton & Co. 1881. 12mo. xv + 448.
Reprinted with corrections, 1889. *See* (175). Reprinted with further corrections, 1892 (196). Reprinted 1895. Russian translation: St. Petersburg, 1882 (127). German translation: Brunswick, 1883 (135). Spanish translation: Madrid, 1887 (163). Polish translation: 1st edition, Warsaw, 1889 (176). Polish translation: 2nd edition, Warsaw, 1902 (245).

(116) **The Races of Mankind.** Abridged from chapter iii of ANTHROPOLOGY.
Pop. Sci. Mo., 19: 289–311.

(117) *Review of* Fison and Howitt's Kamilaroi and Kurnai: Melbourne, 1880.
Acad., 19: 264–266.
(Morgan's theories; origin of exogamy; bull-roarer.)

(118) *Review of* Dorman's Origin of Primitive Superstitions: Philadelphia, 1881.
Acad., 20: 339.
(Dorman's animistic explanation of superstitions; doctrine of future punishment; sorcery; cannibalism; couvade; totemism.)

(119) *Review of* Bock's Head-hunters of Borneo: London, 1881.
Acad., 20: 376–377.
(Value of illustrations—Dayaks; migration from Asia to Archipelago, Polynesia, New Zealand; foreign influences on Dayak culture, Brahmanic, Islamic, European; houses, sepulchres, wood-carving, tatuing—Head-hunting.)

(120) *Review of* Phear's The Aryan Village in India and Ceylon: London, 1880.
Nature, 23: 525–526.
(Common fields; patriarchal family; hereditary professions; grants of lands; feudalism.)

(121) *Review of* Dawson's Australian Aborigines: Melbourne and London, 1881.
Nature, 24: 529–530.
(Marriage-regulations; avoidance; numerals; story of Pleiades.)

1881. (122) *Review of* Bastian's Die heilige Saga der Polynesier: Leipzig, 1881.
Nature, 25: 28–29.
(Polynesian civilization; Maori cosmogony; moon-myth.)

(123) *Letter:* **Primitive Traditions as to the Pleiades.**
Nature, 25: 150–151.
(A reply to Mr. Justice Haliburton's letter. Nature 25: 100, 101.)

(124) *Lecture*: **Problems in the History of Civilization.** London Institution, January 24, 1881.
Times, January 26, 1881, p. 12.

(125) **Anniversary Address.** Anthropological Institute, January 25, 1881.
Journ. Anth. Inst., 10: 440–458.
(Review of recent work; sign language; burial customs; use of stone implements; hypertrichosis; tailed men; relation of Australian and Dravidian languages; survivals in Scotland; communal marriage and avoidance, reformation theory; papers read before the Institute; Pitt-Rivers Collection.)

(126) **Notes on the Asiatic Relations of Polynesian Culture.** Anthropological Institute, November 22, 1881.
Journ. Anth. Inst., 11: 401–404. Revue d'Anthropologie, 12: 563.
(Dyak architecture; nose-flute; Asiatic and Polynesian mythology; swan maiden.)

1882. (127) Anthropologiya: vvedenie k isyčeniio čelovka i tsivilizatsii. Translated by E. C. Evena.
S. Petersburg. 1882. 8vo. xxv + 434 + ii.
Editor's preface to Russian edition; select bibliography; 78 illustrations.

(128) **The Study of Customs.**
Macmillan's Mag., 46: 73–86 (May, 1882).
(Philosophical speculation applied to customs—Mr. Herbert Spencer's *Ceremonial Institutions*; Japanese custom of wearing two swords; shaking hands; tatuing; hair-cutting of criminals; mourning colours; Methods of dealing with evidence:—historical method—horse at funeral; geographical method—nose-flute; inferential method—days of the week, sabbath, seven planets.)

(129) *Review of* Elton's Origins of English History: London, 1882.
Nature, 25: 501–502.
(Hesperides; races of England; customs of inheritance; survivals; Mithra.)

(130) *Review of* Shway Yoe's The Burman: London, 1882.
Nature, 26: 593–595.
(Importance of knowledge of native habits; animistic view of dreams; propitiation of spirits; Buddhist doctrine of Karma and transmigration; Buddhist morals; Hindu influence on Burma; dancing as expression of emotion; tattoo.)

(131) ——— *letter* on the 'tattooed man'.
Nature, 27: 6.

(132) *Lecture*: **A Visit to Athens.** Wellington Literary Institute, January 13, 1882.
Wellington Weekly News, January 19, 1882.

1882. (133) *Four Lectures on* **The History of Customs and Beliefs.** Royal Institution, April–May, 1882.

Times, May 18, 1882. *See* (127).

I. April 8. The Study of Customs; its difficulties, and the untrustworthiness of speculative explanations—Criticism of Mr. Herbert Spencer's mode of treatment—Available methods of tracing the origin of customs—Historical method; example, the funeral horse-sacrifice—Geographical method; example, the nose-flute—Inferential method; example, the week and week-days.

II. April 25. Travelling of ideas and customs from Old World centres of civilization into the Far East, Polynesia, and America—Hindu marriage-ceremonies—Use of cycles in magic and time-measuring—Early astronomy; the Seven Heavens—The Elements and Ages of the World—Means of distinguishing between diffusion and re-invention of thoughts and arts.

III. May 2. Origin and migration of myths—Metaphor and mythical fancy—Key to nature-myths in phrases, riddles, &c.—The Raising of the Land—The Symplegades—The World swallowed up by Night—The four cardinal points—Deluge traditions.

IV. May 9. Means of distinguishing ideas and institutions in early stages of growth, from broken-down remains of higher culture—The Polynesian and South African problems—Early conceptions of nature—Animism—Effects of early social, philosophical, and religious ideas in the civilized world—Conclusion.

(134) *Lecture*: **Original and Borrowed Civilization.** Leeds Philosophical and Literary Society, November 28, 1882. Reports Leeds Phil. and Lit. Soc. 1882–1883 (*title only*).

1883. (135) Einleitung in das Studium der Anthropologie und Civilisation. Deutsche autorisirte Ausgabe von G. Siebert . . .

Brunswick: Vieweg. 1883. 8vo. xix + 538.

Preface 1881; preface to German edition; 78 illustrations.

B.M. [10007. g. 34],

(136) *Article* **Magic.**

Encyclopaedia Britannica, ninth edition, 15: 199–206.

(Origin of term; magical beliefs and practices—Magic of lower races; magicians; fetiches—Egyptian, Babylonian, Assyrian magic; divination; astrology—Greek and Roman magic; omens—Philosophic and theurgic magic; names and spells—Asiatic magic, Hindu, Tibetan, Chinese—Magic in Christendom—Origin of magic; association of ideas.)

(137) *Article* **Mexico (ancient).**

Encyclopaedia Britannica, ninth edition, 16: 206–214.

(Name—History; migration from Asia and Polynesia; Asiatic influence on civilization; calendar, zodiac, four ages, planetary spheres, patolli. (*See* 97.)—Picture-writing; native chronicles—Civilization; government; palaces; war—Religion; mythology; *teocalli*; prayer; incense; fasting; festivals; mocking—Picture-writing; calendar; sacred fire—Education; marriages; funerals—Agriculture and food; clothing and ornaments; metal-work; art and pastime—Central American culture; architecture.)

(138) *Two Lectures on* **Anthropology.** University Museum, Oxford, February 15, 21, 1883.

Oxford Mag., 1: 88, 111. (February 21, 28, 1883.) Nature, 28: 8–11, 55–59. Science, 1: 525; 2: 57.

I. Evolution and anthropology; barrow-builders of England; races of Fiji, craniology, grammar; hair and race; pigmentation—Type and environment; development of culture; ages of stone and metal; survivals; dreams, offerings to dead—Geography of negro and negrito; types of white race; influence of Egypt.

II. Borrowing of culture; Eskimo; degeneration of culture; Veddas; evolution of culture; sign language—Magic; divining-rod; worm knot; astrology—Anglo-Israelites—Claims of anthropology; the Pitt-Rivers Collection.

1883. (139) **Old Scandinavian Civilization among the Modern Esquimaux.** Anthropological Institute, June 12, 1883.

Journ. Anth. Inst., 13: 348–357; Plates. Revue d'Anthropologie, 13: 534.

(Early accounts of Esquimaux; xviii. century authors; costume; blubber lamp; *nith* songs; games.)

1884. (140) *Article* **Oath.**

Encyclopaedia Britannica, ninth edition, 17: 698–702.

(Origin of term; nature of oath; history; classification of forms; swearing in early Christendom; profane swearing; survivals of heathenism; political, ecclesiastical, and legal oaths in modern civilized nations.)

(141) *Article* **Ordeal.**

Encyclopaedia Britannica, ninth edition, 17: 818–820.

(Etymology—Processes of divination; appeals to corpse; ordeal combined with oath; cursed food and drink; fire, water, hot iron; combat.)

(142) *Introduction to* Samoa a Hundred Years Ago: George Turner; London, 1884. 8vo.

B. [2068. e. 3]. B.M. [2374. b. 16].

(Rapid changes; development from spirit to deity; Tongo incarnate in the owl; ceremonial survival of cannibalism; communism.)

(143) **Memoir of George Rolleston,** *in* Scientific Papers and Addresses by George Rolleston, M.D., F.R.S., arranged and edited by William Turner, M.B., LL.D., F.R.S. 2 vols. Oxford, Clarendon Press. 1884. 8vo. Reprinted for private circulation.

B. [S. Nat. Sci., 395 a]. B.M. [2251. e. 5].

(144) **Archaeology in America.**

American Architect: Boston; 16: 151.

(145) *Review of* Im Thurn's Among the Indians of Guiana: London, 1883.

Nature, 29: 305–307.

(Classification of tribes; pile-houses; animism; law of vengeance (*Kenaima*); magicians; spiritualistic séances.)

(146) **American Aspects of Anthropology: Address to the Section of Anthropology, British Association,** Montreal, August 28, 1884.

Brit. Ass. R., 899–910. Nature, 30: 448–457. Science, 4: 217 (*abstract*). Pop. Sci. Mo., 26: 152.

(Flint implements; antiquity of man; palaeolithic man in Asia; Eskimo; Scandinavian exploration—Origin of Americans; migration from Asia; land connexion; uniformity of type; Asiatic and American languages; social system; matriarchy, matrilineal descent, rules of residence, exogamy, avoid-

ance, totemism—Asiatic and Mexican cosmogonies and calendars; magic; *patolli* and *pachisi*—Distribution of culture-plants and pottery in North and South America; northward drift of civilization—Anthropology in Canada.)

1884. (147) **North American Races and Civilization.** Section of Anthropology, American Association for the Advancement of Science, Philadelphia, Penn.

Science, 4: 345.

(Asiatic migration into North America; diversity of American languages; antiquity of man in America; social condition; maternal descent.)

(148) **Customs of North American Tribes.** October Meeting of the National Academy of Sciences, Newport, R. I., 1884.

Science, 4: 396.

(North American and Asiatic customs; tradition or re-invention, 'homogeny' or 'homoplasy'.)

(149) **How the Problems of American Anthropology present themselves to the English mind.** Anthropological Society of Washington, October 11, 1884.

Science, 4: 545. Post, Washington, October 12, 1884. National Republican, Washington, October 13, 1884.

(Conservatism in America; Society of Friends; Memnonites—North American ceremonies; Ute and Zuñi bull-roarers; re-invention or historical connexion? Iroquois and Zuñi picture-writing; the heart line; Mojave bark girdle; Ute funeral custom; water, soul-bridges—Development in civilization; Pitt-Rivers Museum; Christy collection; systematic collection and arrangement—Bureau of Ethnology—Position and practical value of anthropology; 'survivals'; effects of political bias.)

(150) Lectures as Reader in Anthropology in the University of Oxford. University Museum, 1884.

Hilary Term: **Development of Civilization—Arts of Life.**

(Flint implements and their uses, with practical illustrations. Oxford Mag. 2: 20.)

Easter Term: **Development of Arts and Sciences.**

(Gesture language—gesture and voice—interjectional and onomatopoeic language—the study of language in its relation to Anthropology—art of counting. Oxford Mag., 2: 228, 247, 265, 298.)

Michaelmas Term: **Intellectual Development of Mankind.**

(The Pueblo Indians and their culture—Ethnology of North America—writing. Oxford Mag., 2: 371, 394, 410, 452.)

1885. (151) **Archaeology:** *Appendix to* Anthropology; Daniel Wilson; New York, 1885. 8vo. (Humboldt Library, No. 71.)

(152) **The Patriarchal Theory:** *Review of* McLennan's The Patriarchal Theory; London, 1885.

Academy, 28: 67–68.

(Theory of the patriarchal family twenty years ago; development of McLennan's views; *Primitive Marriage*; matriarchal theory; Maine's *Theories of Primitive Society*, 1883; the Roman paternal family; *patria potestas* and agnation.)

1885. (153) *Review of* Bourke's The Snake-dance of the Moquis of Arizona: London, 1884.
Nature, 31: 429–430.

(154) **American Anthropology**: *Review of* Ten Kate's Reizen en Onderzoekingen in Nord Amerika; Leyden, 1885; and other works.
Nature, 32: 593–594.
(Classification of Pueblo tribes; social organization; antiquity of man in America; stone implements.)

(155) *Letter*: **The Arabian Matriarchate**: June 23, 1885.
Acad., 27: 459.
A reply to Dr. Redhouse's *Notes on Prof. E. B. Tylor's Arabian Matriarchate, propounded by him as President of the Anthropological Section of the British Association, Montreal*, 1884, in Journal of Royal Asiatic Society.
(Position of maternal uncle in Arabia.)
Dr. Redhouse replied, June 29. Acad., 28: 14.

(156) ——— *letter*, August 7.
Acad., 28: 105.
(Wilken's letter in *Bijdragen tot de Taal-, Land- en Volkenkunde van Nederlandsh-Indië.*)

(157) Report of the Committee on the scientific examination of the country in the vicinity of Mount Roraima in Guiana. British Association, Aberdeen, 1885.
Brit. Ass. R., 690.

1885–1898. (158) Reports of the Committee . . . appointed to investigate the physical characters, languages, and industrial and social conditions of the North-Western Tribes of the Dominion of Canada. Appointed at Montreal, 1884.
British Association.
I. Aberdeen, 1885: Brit. Ass. R., 696–708. II. Birmingham, 1886: B. A. R., 285. III. Manchester, 1887: B. A. R., 173–200. IV. Bath, 1888: B. A. R., 233–255. V. Newcastle, 1889: B. A. R., 797–893. VI. Leeds, 1890: B. A. R., 553–715. VII. Cardiff, 1891: B. A. R., 407–449. VIII. Edinburgh, 1892: B. A. R., 545–615. Short report, Nottingham, 1893: B. A. R., 653. IX. Oxford, 1894: B. A. R., 453–463. X. Ipswich, 1895: B. A. R., 522–592. XI. Liverpool, 1896: B. A. R., 569–591. XII. Toronto, 1897: B. A. R., 791 (title), and B. A. R., 1898, 628–688.

(159) Lectures as Reader in Anthropology. University Museum, Oxford, 1885.
Hilary Term: I, II, III. **Early History of the Arts and Sciences.**
(Numeration—Weights and Measures.)
IV, V, VI. **Passages in Herodotus relating to Anthropology.**
(The Lake-dwellers—the Scythians—funeral rites.)
Oxford Mag., 3: 44, 61, 83, 104, 126, 149.
Easter Term: **Development of Mythology, Magic, Games, &c.**
Michaelmas Term: **Social and Religious Systems.**

(Degrees of relationship—origin of religious ideas in primitive society—Animism—Animism and mythology.)
Oxford Mag., 3: 387, 405, 443.

1886. (160) *Article* **Salutations.**
Encyclopaedia Britannica, ninth edition, 21: 235–237.
(Embrace; kiss; caresses; crouching, prostration, kneeling, bowing; uncovering; grasping hands; words of greeting.)

(161) *Article* **Anthropology** *in* A Manual of Scientific Enquiry: 5th edition; London, 1886.
Art. vii, p. 225.
See (31).

(162) Lectures as Reader in Anthropology. University Museum, Oxford, 1886.
Hilary Term: **Mankind—their distribution, antiquity, and early condition.**
Easter Term: **Origins of Civilization.**
Michaelmas Term: **Modes of Expression—Gesture-signs, natural sounds, pictures; language, writing.**

1887. (163) Antropología: Introducción al Estudio del Hombre y de la Civilización. Traducida del inglés por Don Antonio Machada y Álvarez . . .
Madrid: Falcón. 1887. 8vo. xiii + 529.
Preface, 1881; special preface to Spanish edition; select bibliography; 77 illustrations.

(164) *Review of* Lang's Myth, Ritual, and Religion: 2 vols.; London, 1887.
Acad., 32: 277.
(Origin of myth in early stages of human knowledge.)

(165) **Account of a 'Witches' Ladder' found in Somerset.** British Association, Manchester, September 2, 1887; Section H.
Brit. Ass. R., 900 (*title only*). *See* Folklore Journal, 5: 1–5.

(166) Lectures as Reader in Anthropology. University Museum, Oxford, 1887.
Hilary and Easter Terms: **Development of Arts as illustrated in the Pitt-Rivers Museum.**
Michaelmas Term: I, II, III. **Development of Missile Weapons**; IV, V, VI. **Origins of Ornamental Form and Decoration.**

1887–1892. (167) Reports of the Committee appointed to edit a new edition of Anthropological Notes and Queries. British Association.
I. Manchester, 1887: Brit. Ass. R., 172. II. Newcastle, 1889: B.A.R., 186. III. Leeds, 1890: B.A.R., 547. IV. Cardiff, 1891: B.A.R., 404. V. Edinburgh, 1892: B.A.R., 537.

1888. (168) *Introduction to* Aino Folk Tales: B. H. Chamberlain: London, 1888. 8vo. viii + 57.
B.M. [Ac. 9938/11].
(Early accounts of Aino; physical characteristics; Aino language, place-names

in Japan; mythology, Japanese and native elements; folk-lore and primitive philosophy.)

(169) **Notes on Powhatan's Mantle, preserved in the Ashmolean Museum, Oxford.**

Internationales Archiv für Ethnographie, 1: 215–217. Plate. Nature, 39: 232.

(*Powhatan* used as Algonquin tribe name and title; Tradescant's Virginia collection; shell-work.)

(170) **Savages:** *Letter on* **The Arithmetic of the Lower Races.**

Times, September 17, 1888.

(Decimal system founded on use of digits.)

(171) **On a Method of Investigating the Development of Institutions applied to Laws of Marriage and Descent.** Public Lecture, Oxford, June 7, 1888.

Oxford Mag., 6: 431. Journ. Anth. Inst., 18: 91–92.

(172) ——— British Association, Bath; Section H. September 7, 1888.

Brit. Ass. R., 840. Times, September 8, 1888.

(173) ——— Anthropological Institute. November 13, 1888.

Journ. Anth. Inst., 18: 245–272. Nature, 39: 143.

(Avoidance, relation to customs of residence, teknonymy; levirate; couvade—Priority of maternal system; transition from maternal to paternal system; marriage by capture—Relations of exogamy and classificatory system; cross-cousin marriage; relation of capture and exogamy; origin of exogamy in political considerations.

In discussion:—statistical principles.)

(174) Lectures as Reader in Anthropology. University Museum, Oxford, 1888.

Hilary Term: **Anthropological Elucidation of Passages in Greek and Latin Authors.**

Easter Term: **Races and Languages of the World.**

——— *Public Lecture*: June 7. *See* (170).

Michaelmas Term: **Race, Language, and Civilization.**

——— Report of the Reader in Anthropology for 1888. Oxford Univ. Gaz., 19: 405.

1889. (175) ANTHROPOLOGY: AN INTRODUCTION TO THE STUDY OF MAN AND CIVILIZATION.

2nd edition, revised. London: Macmillan & Co.; and New York, 1889. cr. 8vo. xv + 448.

Preface, 1881; select bibliography: 78 illustrations.

(176) Antropologia. Wstęp do Badania Człowieka i Cywilizacyi. Translated by Aleksandra Bąkowska.

Warsaw: Nakład tygodnika 'Prawda'. 1889. 8vo. xi + 413 + ii.

Preface, 1881; select bibliography: 78 illustrations.

1889. (177) *Letter*: **The Fertilization of the Date-Palm in Ancient Assyria**: May 31, 1889.
Acad., 35: 396.

(178) **Notes on the Modern Survival of Ancient Amulets against the Evil Eye.** Anthropological Institute, March 12, 1889.
Journ. Anth. Inst., 19: 54.
(Origin of face-brasses in Latin *phalerae*.)

(179) Lectures as Reader in Anthropology. University Museum, Oxford, 1889.
Hilary Term: **The Anthropology of the Higher Nations.**
Easter Term: **The Anthropology of the Higher Nations—Aryans.**
Michaelmas Term: **Development of Religions.**
——— Report for 1889. Oxford Univ. Gaz., 20: 396.

1889–1890. (180) *Ten Lectures on* **Natural Religion.** Gifford Lectureship: University of Aberdeen, December 1889 and January 1890.
December, 1889.
I. Introductory—**Antiquity and Early Condition of Man.** Natural Religion, treated by methods of Natural Science, forms a branch of Anthropology or the Science of Man, so that an introductory account of this science becomes necessary—Anthropology rests on the principle of the high antiquity of Man. The division of the human species into Races, the formation of Families of Languages, and the rise of Civilizations, being shown by the monuments of Egypt and Babylon to have already taken place as early as 3000 to 5000 B.C., a long period antecedent to this is required—Means of estimating this period given by Geology. Time required for rivers to excavate their valleys, since the early ages when Man inhabited Europe together with the Mammoth and other extinct mammals—Condition of Man in the Palaeolithic period illustrated by his rudely-chipped stone implements, contrasted with the finer and polished implements of the more modern Neolithic period—Problem how far the state of savages of the early Stone Age is represented by that of savages surviving into modern times—Stone implements of Tasmania compared with those of European drift-men—Analogy between modern and remotely ancient savages as bearing on the Development of Civilization.
II. **Development and Transmission of Culture.** Through all branches of Culture, development depends on similar operations of mind. It is thus possible to learn, from invention and progress in material arts, the principles to be applied to the study of intellectual and religious institutions—Inventions do not arise by sudden and spontaneous efforts, but by gradual and progressive modifications—Illustration from the history of fire-arms—The directing tendency in development is often that of practical utility, but it may be some other motive—Illustration from head-dresses of Friesland—Development cannot be safely conjectured from a single stage, but requires study of the series of stages—Illustration from the history of ball-games—Method of determining whether similar arts or customs in different regions were independently invented, or derived from a common source—Illustration from certain games allied to backgammon in the Old and New World.
III. **Natural Theology and Natural Religion.** The term 'Natural Theology' due to Varro, the Roman grammarian—Raymundus de Sabundâ—Expediency as an avowed ground for belief in past ages, now discountenanced—

Theory of the invention of religion for political purposes untenable—Rise of the theory of Natural Religion as implanted in, or reasoned out by, Primitive Man; Herbert, Voss, Wilkins, Clarke, Butler—This so-called Natural Religion, defined as mainly consisting of Monotheism and the doctrine of Future Retribution, is an artificial extract from the religions of cultured nations, and in no way corresponds with the actual religions of the lower races—Scheme of the philosophic framework of the religions of the world: its basis in Animism or the Doctrine of Souls—The religions of low and early races exemplified in that of the Tasmanians; comparison of its doctrines with those familiar to the modern civilized world.

IV. **Souls.** The Human Soul as defined in early stages of culture—The Australian race as representatives of Prehistoric Man—The Soul conceived as breath, blood, shadow, &c.; these terms not originally metaphorical, but expressions of primitive science—The Life-soul and the Phantom-soul; their combination; the doctrine of Several Souls of Man—The Life-soul; its departure the cause of death, trance, sickness, sleep, and dreams—The Phantom-soul; its appearance in dreams and visions—Development of the early doctrine of Soul, and its representation in Art.

V. **Souls** (*continued*). The Phantom-soul; its appearance in dreams and visions—Souls of Animals, Plants, and Objects generally—Materiality and Mortality of the Soul, as defined in Early Animism—Egyptian religion; earliest recorded conceptions of Immateriality and Immortality—Later definitions of the Soul in Classic and Christian philosophy—Rise of independent Psychology.

January, 1890.

VI. **Future Life.** Existence of the Soul after death—Ghosts haunting or returning to their home or burial-place; efforts of the living to propitiate or expel them; funeral sacrifices and feasts—Departure of the soul to a distant country, mountain, or island; Western location of Region of Souls; Underworld or Hades; Heaven—Life of Departed Souls—Doctrine of Continuance—New application and survival of Funeral Sacrifices—Rise of the Doctrine of Retribution; its history.

VII. **Spiritual Beings.** Spirits pervading the world—Demons; regarded as souls of the dead, or as of similar nature—Their functions as causes of actual events; their division into Good and Evil—Demons as causes of disease; the doctrine of demoniacal Possession and Obsession constitutes a primitive Theory of Medicine—Cure by exorcism—Inspiration by Demon; Oracle-possession—Familiar spirits—Belief in Witchcraft involves early explanations of real phenomena—Its supersession by Science.

VIII. **Spiritual Beings** (*continued*). Souls of ancestors regarded as Patron-Spirits—House-Spirit—Guardian Genius—Festival of the Natal Genius; its survival in the modern world—Winged Spirits—The Winged Figures of Assyria—Fertilization of the Date-Palm—Hebrew Cherubim—Greek and Roman genii—Angels in Christian Art.

Nature 41: 283. Science 15: 126.

IX. **Nature Spirits.** Nature regarded in early religion as animated by Souls, or Spirits similar to Souls—Nature-Spirits; Water-Spirits, Nymphs, Nixes; Tree and Forest Spirits, Elves, Fairies—Nature Deities; Heaven, Earth, Sea, Sun, Moon, Rivers, Mountains, &c.—Polytheistic Deities; their anthropomorphic character; their transmission from one national religion to another—Supremacy in Polytheism.

X. **Polytheism—Pantheism—Monotheism.** Doctrine of the Supreme Deity in Polytheism; its distinction from Monotheism—Introduction of

belief in a Supreme Being among uncultured races from Christianity and Mohammedanism; the 'Great Spirit'—Good and Evil Principles in Dualism—Rise of Pantheism and Monotheism—Connexion of Religion and Philosophy.

See (188) 1890–91.

1890. (181) *Preface to* Ling Roth's The Aborigines of Tasmania: Halifax, 1890.

B. [247194. d. 3]. B.M. [10492. f. 32].

(Tasmanians as representatives of palaeolithic man; stone-implement-making; comparison with man of Mammoth Period in Europe.)

(182) ——— *Supplementary Note*: 2nd edition; Halifax, 1899.

B.M. [10492. ff. 24].

(Progress made in anthropological study of Tasmanians; implements, collection in Pitt-Rivers Museum, Oxford; comparison with European implements—scrapers—plateau flints of Kent; traces of palaeolithic civilization in West Australia and New Zealand. *See Early History of Mankind*, p. 195.)

(183) *Review of* White's Ancient History of the Maori: London, 1889. English Historical Review, 5: 391.

(Maori myth, tradition, genealogy; Maui myth and matrilineal pedigree.)

(184) **The Winged Figures of the Assyrian and other Ancient Monuments.** Society of Biblical Archaeology, June 3, 1890.

Proc. Soc. Bibl. Arch., 12: 383–393. Plates.

(Assyrian and Egyptian winged figures; 'tree of life'; fertilization of date-palm; significance in Assyrian nature-worship; honeysuckle pattern; influence on Hebrew, Classical, and Christian art.)

See Gifford Lecture, viii. (180).

(185) *Lecture*: **Anthropology.** Bristol University College, September 30, 1890.

Western Daily Press, Evening News, Bristol Times, Bristol Mercury, October 1, 1890.

(Relation of anthropology to mechanics—stone implements, origin of handles; decorative art—palm and honeysuckle pattern; physics—magnet; Animism; Tasmanian religion.)

(186) Lectures as Reader in Anthropology. University Museum, Oxford, 1890.

Hilary Term: **Development of Religions.**

Easter Term: **Early Development of Institutions: Family and Tribe; Property; Penal Law; Government.**

Michaelmas Term: **Elementary Anthropology.**

——— Report for 1890. Oxford Univ. Gaz., 21: 501.

1890–1892. (187) Report of the Committee appointed to investigate the habits, customs, physical characteristics, and religions of the natives of India.

British Association, Leeds, 1890.

Brit. Ass. R., 547.

——— Edinburgh, 1892.

Brit. Ass. R., 615–617.

1890–1891. (188) *Ten Lectures on* **Natural Religion.** Gifford Lectureship: University of Aberdeen, December 1890 and January 1891.

December, 1890.

I. **Spirit Intercourse.** Communication of Spiritual Beings with Man in Dreams and Visions; Incubation—Oracular Possession and Obsession; Inspiration—Remains of the Dead inhabited by the Soul; relic-worship—Images associated with, or inhabited by, Spirits; Idolatry—Transition from the Animistic doctrine of Spirit acting on Matter to the scientific doctrine of Force.

II. **Rites and Ceremonies.** Image-worship as a means of communication with deities—Prayer and Sacrifice as exemplified in the religions of lower and higher races.

III. **Rites and Ceremonies** (*concluded*). Fasting—Narcotics—Temples and Shrines—Festivals—Rites kept up in sport.

IV. **Magic.** Magic based on Association of Ideas—Symbolic practices; bewitching by images, &c. Sympathetic Medicine; Evil Eye; Divination—Astrology; Days of the Week—Relation of Magic to Animism and its place in Development of Thought.

V. **Ideas of the Universe.** Barbaric and ancient theories of the Universe; Heaven; Hades—The Sun's descent at night into Hades; its disappearance behind mountains—Upraising of Sky; Sun-gates—Planetary spheres; Buddhist, Moslem, Christian systems.

January, 1891.

VI. **Primitive Society.** Marriage-systems; maternal and paternal family; Marriage by capture, service, purchase; Exogamy—Introduction of religious control into marriage institutions.

VII. **Primitive Society** (*continued*). Primitive Morality independent of Religion; its apparent irregularity due to difference in circumstances and stages of development—Kinsfolk and strangers; infants; the aged and incurable—Direct and indirect acts—burying, setting adrift, immuring.

VIII. **Primitive Society** (*concluded*). Transformation of Social Conduct—Gift and Trade; Vengeance and Criminal Law—Collective Responsibility—Individualism—Introduction of religious control over moral and social laws.

IX. **Diffusion of Rites and Beliefs.** Rosaries; Jain, Buddhist, Hindu, Mohammedan, Christian—Modern diffusion of accounts of a Deluge—Geological myths—Methods of distinguishing native from imported ideas in the religions of the world.

X. **Causation in the Universe.** Transition from Spiritual to Physical Theory of Nature; Newton's Principia—Theological and Philosophical Causation; Free-will and Necessity in the earlier and later stages of culture—Conclusion.

See (180).

1891. (189) PRIMITIVE CULTURE: RESEARCHES INTO THE DEVELOPMENT OF MYTHOLOGY, PHILOSOPHY, RELIGION, LANGUAGE, ART, AND CUSTOM.

3rd edition, revised. 2 vols. London (Oxford pr.): Murray. 1891. 8vo. xii + 502 and viii + 471.

Prefaces, 1871; 1873; September, 1891. Paging of 2nd edition retained.
B. [247115. d. 38, 39]. B.M. [10007. cc. 25].

1891. (190) **History of Marriage**: *Review of* Westermarck's History of Human Marriage; London, 1891.

Acad., 40: 288–289.

(Use of term 'marriage'; relation of Westermarck's views to those of Darwin and A. R. Wallace; 'promiscuity'; Tylor's own position on problems of primitive society (*see* 173); statistical method; prohibition of marriage between kindred; exogamy; aversion; patriarchal and maternal systems; sexual selection.)

(191) **The Limits of Savage Religion.** British Association, Cardiff; Section of Anthropology. August 21, 1891.

Brit. Ass. R., 800. Nature, 44: 511.

(192) ——— Anthropological Institute, November 10, 1891.

Journ., Anth. Inst., 21: 283–301. Nature, 45: 71. Times, November 21, 1891.

(Errors of observation; Great Spirit; Mandan deluge-myth; gods in South America; ideas of future life—West Australian Motogon and Chenga; Baiame and other deities of South-east Australia; ideas of future life—Tasmanian beliefs.)

(193) **Charms and Amulets.** International Folk Lore Congress, 1891.

Trans. Internat. Folk Lore Congress: 387–393.

(*Guliwill* from Australia; onion stuck with pins; *corp-cre*; witches' ladder; worm-knot; *cimaruta*, &c.)

(194) Discussion on General Pitt-Rivers' paper on Typological Museums. Society of Arts, December 16, 1891.

Journal of the Society of Arts, 40: 121.

(The Pitt-Rivers Museum; use of typological collections.)

(195) Lectures as Reader in Anthropology. University Museum, Oxford, 1891.

Hilary and Easter Terms: **Elementary Anthropology.**

Michaelmas Term: **Origin and Development of Language and Writing.**

——— Report for 1891. Oxford Univ. Gaz., 22: 394.

1892. (196) ANTHROPOLOGY: AN INTRODUCTION TO THE STUDY OF MAN AND CIVILIZATION.

3rd edition revised. London: Macmillan & Co. 1892. cr. 8vo.

(197) *Sections in* Notes and Queries on Anthropology: edited for the Council of the Anthropological Institute by John George Garson, M.D., and Charles Hercules Read, F.S.A.

2nd edition, London: the Anthropological Institute. 1892. 12mo. x + 242. Coloured Plate.

First part entirely re-cast; second part revised and additional chapters written.

xvi. Fire, 112. xvii. Invention, 113. xviii. Variation, 114. xx. Conservatism, 116. xxii. Writing, 118. xxvii. Religion, Fetishes, &c., 130. xxviii. Mythology, 140. xxix. Superstitions, 142. xxx. Magic and Witchcraft, 144. xxxii. Morals, 146. xxxiii. Covenants, Oaths, Ordeals, 149. xxxv.

Customs, 151. xlii. Etymology, 170. xliii. Language, 171. xliv. Poetry, 174. xlv. History, 175. lx. Arithmetic, 209.
See (55) 1874, (236) 1899.

1892. (198) '**Couvade**'—**the genesis of an anthropological term**: *Letter*, Nov. 2, 1892.
Acad., 42: 412.
Answer to letter from Dr. Murray. Acad., 42: 389.
(Authority for term in French literature.)

(199) ——— *Letter*, Dec. 6, 1892.
Acad., 42: 542.
(Basque and Béarnese couvade.)

(200) **Anniversary Address.** Anthropological Institute, January 26, 1892.
Journ. Anth. Inst., 21: 396–411.
(Review of recent work; plateau implements; origin of art; Malagasy art; position of Berber languages; anthropological work of Wilken and Moseley).

(201) **The Tasmanians as representatives of Prehistoric Man.** Ashmolean Society, Oxford, May 30, 1892.
Oxford Mag., 10: 377 (notice).
See (207) 1893.

(202) **A Stone Age Basis for Oriental Study**: Inaugural Address, Section of Anthropology: Ninth International Congress of Orientalists: London, September, 1892.
Trans. Ninth Internat. Congress Orientalists, 2: 805–813. Smithsonian Reports, 1893: 701–708.
(Palaeolithic Egypt; Tasmanian implement-making; Tasmanian morals, language, religion, not below normal savage level; permanence as well as development possible in culture—Neolithic culture; South Sea Islanders; aborigines of Beluchistan and China; Hindu and Egyptian traditions—Migration of culture from higher to lower nations; Asiatic influence in Polynesia and New Zealand.)

(203) Lectures as Reader in Anthropology. University Museum, Oxford, 1892.
Hilary Term: **Early Stages of Literature and Science.**
Easter Term: **Early Stages of Science and Art.**
Michaelmas Term: **Anthropology as related to Ancient and Modern History.**
——— Report for 1892. Oxford Univ. Gaz., 23: 626.

1893. (204) **Folk Rhymes**: *Review of* Baring-Gould's Strange Survivals; London, 1892: and Northall's English Folk Rhymes; London, 1892.
Academy, 43: 73.

(205) **Anniversary Address.** Anthropological Institute, January 24, 1893.
Journ. Anth. Inst., 22: 377–384.
(Review of recent work; importance of structure of language; Blackfeet Indians, phonetics, kinship terms, &c.)

1893. (206) **Remarks on a Collection of the Rude Stone Implements of the Tasmanians, showing them to belong to the Palaeolithic or unground stage of the implement-maker's art.** Anthropological Institute, March 21, 1893.
Journ. Anth. Inst., 23: 52. Nature, 47: 527.
(Moral level of Tasmanians.)

(207) **On the Tasmanians as Representatives of Palaeolithic Man.** Anthropological Institute, March 21, 1893.
Journ. Anth. Inst., 23: 141–152. Plates.
See (201) 1892.
(Early accounts of implements; mineralogical data; method of sharpening, handling, use—Comparison with European palaeolithic implements; scrapers; hafting—Degeneracy of Tasmanians—Summary of Tasmanian culture.)

(208) Lectures as Reader in Anthropology. University Museum, Oxford, 1893.
Hilary Term: **Anthropology of Social and Political Institutions.**
Easter Term: **Anthropology of Moral and Religious Institutions.**
Michaelmas Term: **Races of Mankind as classified by Language, Civilization, and History.**
———— Report for 1893. Oxford Univ. Gaz., 24: 584.

(209) Report of the Committee on Uniformity in the Spelling of Savage and Barbaric Languages and Race Names. British Association, Nottingham, 1893.
Brit. Ass. R., 662.

1894. (210) **T. H. Huxley as Anthropologist.**
Fortn. Rev., N. S., 58: 310–311.

(211) **On the Diffusion of Mythical Beliefs as Evidence in the History of Culture.** British Association, Oxford; Section H. August 9, 1894.
Brit. Ass. R., 774. Nature, 50: 439.
(Asiatic influence on pre-Columbian culture of America; Bridge of the Dead; Mexican and Buddhist Journey of the Soul.)

(212) **On some Stone Implements of Australian Type from Tasmania.** British Association, Oxford; Section H. August, 1894.
Brit. Ass. R., 782.

(213) **On the Occurrence of Ground Stone Implements of Australian Type in Tasmania.** Anthropological Institute, December 11, 1894.
Journ. Anth. Inst., 24: 335–340. Plate.
(Comparison with European palaeolithic implements; question of hafting; description of specimens.)

(214) Lectures as Reader in Anthropology. University Museum, Oxford, 1894.

Hilary and Easter Terms: **Races of Mankind as classified by Language, Civilization, and History.**

Michaelmas Term: **Intellectual Development of Mankind, Language, Writing, Arithmetic, &c.**

——— Report for 1894. Oxford Univ. Gaz., 25: 546.

1895. (215) **Pleyte's Batak Tales:** *Review of* Pleyte's Bataksche Vertellingen; Utrecht, 1894.

Acad., 47: 308–309.

(216) *Two Lectures on* **Animism as shewn in the Religions of the Lower Races.** Royal Institution, March 28, April 4, 1895.

Times, March 30, April 6, 1895.

I. Accounts of the religions of savage and barbaric races—Effects of intercourse with the civilized world—Communication with foreign nations proved by Deluge-traditions, &c.—Animism of lower races reduced to its native elements.

II. Classification of Religions under the Animistic system—Tasmanians as modern representatives of Prehistoric Man in the Palaeolithic period—Tasmanian Animism—American Indians as representatives of Prehistoric Man in the Neolithic period—American Animism—The Classic or Graeco-Roman Stage of Animism—Comparison with the great religions of the modern world.

(217) Lectures as Reader in Anthropology. University Museum, Oxford, 1895.

Hilary Term: **Early Stages of Knowledge—Science, Magic, Mythology, History.**

Easter Term: **Anthropology of Social and Political Institutions.**

(218) Lectures as Professor of Anthropology in the University of Oxford. University Museum, 1895.

Michaelmas Term: **The Relation of Savage Life to the Higher Forms of Civilization.**

——— Report for 1895. Oxford Univ. Gaz., 26: 579.

(219) ——— *Public Lecture*: **The Patriarchal and Matriarchal Family Systems.** University Museum, Oxford, October 24, 1895.

1896. (220) Cywilizacja Pierwotna. Badania rozwoju mitologji, filozofji, wiary, mowy, sztuki i zwyczajów. Translated from the 3rd English edition by Z. A. Kowerska (Madame Rząd); with preface, biographical sketch, and notes by Jan Karłowicz.

2 vols. Warsaw: The 'Głos': F. Czernak. 1896, 1898. 8vo. iv + 433 and iii + 416.

Editor's preface; biography; prefaces, 1871, 1873, 1891; notes.

B.M. [10007. dd. 6].

(221) *Introduction to* The History of Mankind. An English translation from the 2nd edition, 1894–5, of Ratzel's Völkerkunde: London, 1896.

B.M. [7002. h, 3].

(Value of illustrations; of museum specimens; grouping of ethnographic

collections; Pitt Rivers Museum. Decorative art of savages—Native and borrowed culture; study of material culture valuable for study of social, moral, and religious institutions—State of anthropological science.)

1896. (222) **On American Lot-Games, as Evidence of Asiatic Intercourse before the Time of Columbus.**

In Ethnographische Beiträge . . . dem Professor Adolf Bastian gewidmet zu seinem 70sten Geburtstage am 26. Juni 1896.

Internationales Archiv für Ethnographie, suppl. to ix, pp. 55–67. Coloured plate, and figures.

B. [1902. c. $\frac{1}{6}$].

(Relation of *pachisi* and *patolli*—Backgammon; Arabic form; Chinese; mentions in Sanskrit literature; later history—Early mentions of *patolli*; spread of game northwards; Apache lot-game; Huron game of the Bowl; Iroquois game of deer-buttons—Summary of evidence.)

(223) **The Matriarchal Family System.**

Nineteenth Century, 40: 81–96 (July, 1896).

(Patriarchal theory of primitive family; McLennan's *Primitive Marriage*; 'promiscuity'—Maternal descent; kinship; aversion—Priority of paternal or maternal system—Maternal system associated with residence in wife's family; Sumatra, Formosa, Kasia, Garo; Pueblo Indians; North America; Banzai, Ashanti; Queensland—Origin of maternal system: (1) social causes; residence; inheritance, the Erbtochtermann; (2) political; exogamy; peace, numerical strength—Effect of paternal family instinct; elopement, capture, purchase—Regularity of human action; scientific method; advantage of anthropology over other sciences in dealing with more direct evidence.)

(224) **The Formation of the Family**: *Review of* Grosse's Die Formen der Familie und die Formen der Wirthschaft; Freiburg & Leipzig, 1896.

Nature, 55: 51.

(Economic classification of mankind; division of labour between the sexes; maternal clan and family; exogamy not derived from aversion to marriages of near kin.)

(225) **Steinmetz on the Evolution of Punishment**: *Review of* Steinmetz's Ethnologische Studien zur ersten Entwicklung der Strafe: Leiden, 1894.

Academy, 49: 49.

(Law of vengeance; formalization; duel; family discipline; punishment by the community; vengeance and chastisement in relation to religion; ghost-fear; future punishment and reward.)

(226) **The Hale Series of Huron Wampum Belts**: *Notes and addenda to* Four Huron Wampum Records: a Study of Aboriginal American History and Mnemonic Symbols; by Horatio Hale, M.A. (Harvard) . . . Anthropological Institute, December 8, 1896.

Journ. Anth. Inst., 26: 248–254. Figures.

(Date shown to be recent by European method of drilling beads.)

(227) Lectures as Professor of Anthropology. University Museum, Oxford, 1896.

Hilary Term: **Ancient and Barbaric Life as related to Higher Civilization.**

Easter and Michaelmas Terms: **Structure and Development of Language; Classification of Mankind by Language. Picture-writing and Phonetic-writing.**

——— Report for 1896. Oxford Univ. Gaz., 27: 634.

1896. (228) ——— *Public Lecture*: **North American Picture-writing, with special reference to a series of historical Wampum Belts of the Hurons.** November 23, 1896.

1897. (229) Lectures as Professor of Anthropology. University Museum, Oxford, 1897.

Hilary Term: **Early Stages of Knowledge—Science, Magic, Mythology, History.**

Easter Term: **Anthropology of Social and Political Institutions.**

Michaelmas Term: **Anthropology of Social, Moral, and Religious Institutions.**

——— Report for 1897. Oxford Univ. Gaz., 28: 590.

1898. (230) **Remarks on the Totem Post from the Haida village of Masset, Queen Charlotte Islands, now erected in the grounds of Fox Warren, near Weybridge.**

Journ. Anth. Inst., 28: 133–135. Plate.

(Haida genealogy.)

(231) **Remarks on two British Columbian House-posts with totemic carvings, in the Pitt Rivers Museum, Oxford.**

Journ. Anth. Inst., 28: 136–137. Plate. L'Anthropologie, 10: 230.

(House-posts belonging to Haida-Tsimshian group of tribes; totem-myth; Killer-Whale; conventional art; representation of embodied spirit; Killer-Whale myth and modern Indian belief in a good and evil deity.)

(232) **Remarks on Totemism, with especial reference to some Modern Theories respecting it.** Anthropological Institute, May 24, 1898.

Journ. Anth. Inst., 28: 138–148. Nature, 58: 189.

A Paper arising out of the preparation of an address to a meeting of a philosophical society in Oxford under the presidency of Professor Sanday, on certain views on the anthropology of religion contained in the works of Mr. J. G. Frazer and Dr. F. B. Jevons.

(Tylor's position on Totemism; his first writings on the subject, 1867; influence of McLennan—'Totemism,' existing confusion in terms—McLennan's *Primitive Marriage*, 1865; totems and exogamy; *Worship of Animals and Plants*; totemism proper in North America; Long's Ojibway *totam* a confusion of totem and *manitu*; McLennan's extension of the term; origin of deities; Florida, Fiji—Frazer's *Totemism*, 1887; Samoa; incarnation-animals; generalization in primitive philosophy; 'species-deities'; Patagonian family-deities; Haida totem-clans and creation-legends—Exaggeration of position of totemism in history of religion—Jevons' *Introduction to the History of Religion*; hypothetical 'totem-sacraments'—Recent history of subject; McLennan, Herbert Spencer; Frazer's *Golden Bough*; soul-transference, external soul in folk-lore—Wilken's view of origin of totems; *Animism . . . of the Malay*

Archipelago, 1884–5; animal-worship; transmigration of souls—Codrington's *The Melanesians*; soul-transference—Baldwin Spencer's *Tribes of Central Australia*; exogamous system of the Arunta; churinga, local totems—Exogamy and totemism, existing independently and combined; social action of totem.)

1898. (233) **The Survival of Palaeolithic Conditions in Tasmania and Australia, with especial reference to the modern use of unground stone implements in Western Australia.** British Association, Bristol; Section of Anthropology. September 9, 1898.

Brit. Ass. R., 1014. Journ. Anth. Inst., 28: 199.

Nature, 59: 162.

(Quasi-palaeolithic character of Tasmanian implements; character of Australian implements recently palaeolithic; use of chipped stones in Australia; ground stone hatchets introduced from Torres Straits; resemblance between Australian and prehistoric European skulls.)

(234) Speech on the final report of the Committee on the North-Western Tribes of Canada. British Association, Bristol, September 10, 1898.

Nature, 59: 162. *See* Brit. Ass. R., 628.

See (158) 1885.

(235) Lectures as Professor of Anthropology. University Museum, Oxford, 1898.

Hilary Term: **Ancient and Barbaric Stages of Culture compared with Advanced Civilization.**

Easter Term: **Anthropology of Ancient Civilized Nations.**

Michaelmas Term: **Development of Culture—Arts of Life.**

——— Report for 1898. Oxford Univ. Gaz., 29: 614.

1899. (236) *Sections in* Notes and Queries on Anthropology; edited for the British Association for the Advancement of Science by John George Garson, M.D., and Charles Hercules Read, F.S.A.

3rd edition. London: the Anthropological Institute. 1899. 12mo. xii + 252. Coloured plate.

'Edited by a Committee of the British Association of which Prof. E. B. Tylor, F.R.S., is chairman.'

Sections as in 2nd edition.

See (55) 1874, (197) 1892.

(237) Lectures as Professor of Anthropology. University Museum, Oxford, 1899.

Hilary Term: **Development of Culture—Arts of Life.**

Easter Term: **Anthropology in Classical Literature.**

Michaelmas Term: **Classification of Mankind by Race, Language, and Civilization.**

——— Report for 1899. Oxford Univ. Gaz., 30: 714.

1900. (238) **The Stone Age in Tasmania as related to the History of Civilization.** British Association, Bradford; Section H. September 5, 1900.

Brit. Ass. R., 897. Journ. Anth. Inst., 30 : Reviews and Miscellanea, 37. Nature, 62 : 636–637.

(Tasmanian culture below that of Man of Mammoth Period in Europe; stone implements, arts of life, mythology; animism.)

1900. (239) **On Stone Implements from Tasmania**: Extracts from a letter by J. Paxton Moir. Exhibition of Tasmanian Implements. Anthropological Institute, November 27, 1900.

Journ. Anth. Inst., 30: 257–262. Plates.

(240) Lectures as Professor of Anthropology. University Museum, Oxford, 1900.

Hilary Term: **Anthropology in Ancient Literature.**

Easter Term: **Early Stages of Civilization—Arts of Subsistence and Protection.**

Michaelmas Term: **Development of Language; Writing; Arithmetic.**

——— Report for 1900. Oxford Univ. Gaz., 31 : 672.

1900–1902. (241) Reports of the Committee on the Ethnological Survey of Canada. British Association.

(Nominated at Liverpool, 1896; reported 1897, 1898, 1899.)

IV. Bradford, 1900 : Brit. Ass. R., 468–568. V. Glasgow, 1901 : Brit. Ass. R., 409, 410. VI. Glasgow, 1902 : Brit. Ass. R., 353–449.

(242) Enquiry as to 'Serjeant Bettesworth.' Notes and Queries, 9th series, 7 : 127.

1901. (243) Lectures as Professor of Anthropology. University Museum, Oxford, 1901.

Hilary and Easter Terms: **Social, Political, and Religious Institutions of the Ancient Civilized Nations, as compared with those of Savage and Barbaric Peoples.**

Michaelmas Term: **Race, Language, and Civilization.**

——— Report for 1901. Oxford Univ. Gaz., 32 : 650.

(244) *Public Lecture*: **Totems and Totemism, with special reference to the Totem-post from British Columbia in the University Museum.** University Museum, Oxford, November 22.

Oxford Mag., 20 : 108.

(Origin of exogamy not in aversion but in political considerations.)

See (247).

1902. (245) Antropologja. Wstęp do Badania Człowieka i Cywilizacji ... Translated by Aleksandra Bąkowska.

Second edition. Warsaw: Stefan Demby, 1902. la 8vo. xi + 446.

Photograph; preface, 1881; select bibliography; 78 illustrations.

(246) **Anthropology**: supplement under corresponding headings to article in Ninth edition.

Encyclopaedia Britannica, tenth edition, 25 : 464–467.

(Tasmanians as representatives of low palaeolithic man—stone implements, weapons, food, clothing, arts, language, numeration, religion, social life.)

1902. (247) Lectures as Professor of Anthropology. University Museum, Oxford, 1902.
Hilary Term: **Anthropological Evidence in Ancient Literature.**
Easter Term: **Early Stages of Civilization—Language, Writing, Arithmetic, &c.**
Michaelmas Term: **Outlines of Anthropology.**
——— Report for 1902. Oxford Univ. Gaz., 33: 548.

(248) **A Note on a Haida Totem-post lately erected in the Pitt Rivers Museum at Oxford.**
Man, 1902, 1. Coloured plate: illustrations.
(Description; use of word 'totemism'.)

(249) **Malay Divining Rods.**
Man, 1902, 40.

(250) **Memorandum on the present state and future needs of Anthropology in Oxford**: *in* Statements of the needs of the University; Oxford, Clarendon Press, 1902. 8vo. p. 70.
B. [Oxon. 8vo. 692].

(251) ——— Report from the Delegates of the Oxford University Museum (signed, on behalf of the Heads of Museum Departments). Ibid., p. 84.

1903. (252) PRIMITIVE CULTURE: RESEARCHES INTO THE DEVELOPMENT OF MYTHOLOGY, PHILOSOPHY, RELIGION, LANGUAGE, ART, AND CUSTOM.
Fourth edition, revised. 2 vols. London (Plymouth pr.): Murray, 1903. 8vo. xii + 502 and viii + 471.
Prefaces, 1871, 1873, 1891; October, 1903.
Noticeable alterations; I. 167—Vocal Tone; II. 234-238—Totemism.
B. [S. Hist. civ. $\frac{21}{1,2}$]. B.M. [2024. b].

(253) Lectures as Professor of Anthropology. University Museum, Oxford, 1903.
Hilary Term: **Race, Language, and Civilization.**
Easter Term: **Development of Letters, Numerals, Weights and Measures.**
Michaelmas Term: **Anthropological Reconstruction of History.**
——— Report for 1903. Oxford Univ. Gaz., 34: 560.

1904. (254) *Review of* Reports of the Cambridge Anthropological Expedition to Torres Straits: vol. v: Sociology, Magic, and Religion of the Western Islanders.
Manchester Guardian, October 12, 1904, p. 5.
(Aetiological myths and folk-lore parallels.)

(255) Lectures as Professor of Anthropology. University Museum, Oxford, 1904.
Easter Term: **Prehistoric Man.**
Michaelmas Term: **Anthropology in Ancient History.**
——— Report for 1904. Oxford Univ. Gaz., 35: 572.

1904–1906. (256) Preliminary Report of the Committee on the present state of Anthropological Teaching. British Association, Cambridge, 1904.
Brit. Ass. R., 341 (*title*).
———— Second Report. British Association, York, 1906.
Brit. Ass. R., 701.

(257) Committee for Anthropology: Paper 1. Memorandum on the Position of Anthropology in the University. Submitted to the Hebdomadal Council, Michaelmas Term, 1904.
Oxford: privately printed.

(258) Committee for Anthropology: Paper 2. Memorandum on a proposed Diploma Course in Anthropology. Hilary Term, 1905.
Oxford: privately printed.

1905. (259) Introductory note to an anonymous Obituary Notice of Professor Adolf Bastian.
Man, 1905: 76.

(260) Lectures as Professor of Anthropology. University Museum, Oxford, 1905.
Hilary Term: **Race, Language, and Civilization.**
Michaelmas Term: **Origin and Diffusion of Languages.**
———— Report for 1905. Oxford Univ. Gaz., 36: 612.

1906. (261) Lectures as Professor of Anthropology. University Museum, Oxford, 1906.
Hilary Term: **Prehistoric Man.**
Easter Term: **Race, Language, and Civilization.**
Michaelmas Term: **Early Stages of Art and Knowledge.**
———— Report for 1906. Oxford Univ. Gaz., 37: 663.

1907. (262) Lectures as Professor of Anthropology. University Museum, Oxford, 1907.
Hilary Term: **Early Stages of Art and Knowledge.**
Easter Term: **Races of Mankind.**
Announced for Michaelmas Term: **Anthropological Evidence in History (especially Classical).**

1883. *Section* Anthropology in Hints to Travellers, 5th ed., pp. 222–243. London, R.G.S., 1883.

1889. *Section* Anthropology in Hints to Travellers, 6th ed., pp. 371–392. London, R.G.S., 1889.

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